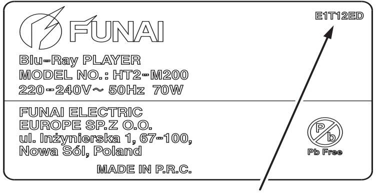
SERVICE MANUAL

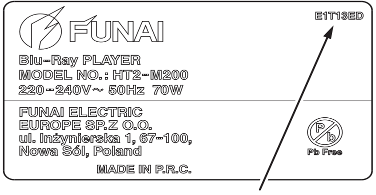
This Service Manual is for the HT2-M200(E1T12ED) / HT2-M200(E1T13ED) model. For the HT2-M200(E1T12ED) / HT2-M200(E1T13ED) model, the letter (E1T12ED) / (E1T13ED) is printed on the Rating Label on the back of the unit. Refer to the Rating Label below.

Rating Label


FUNAI
E1T12ED
Blu-Ray PLAYER
MODEL NO.: HT2-M200
220-240V~ 50Hz 70W
FUNAI ELECTRIC
EUROPE SP.Z O.O.
ul. Inżynierska 1, 67-100,
Nowa Sól, Poland
MADE IN P.R.C.
Pb Free

"E1T12ED"

Rating Label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"E1T13ED"

HOME THEATER SYSTEM

HT2-M200

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SPECIFICATIONS

Specifications

General	
Signal system	NTSC/PAL colour
Power requirements	220 - 240 V AC, 50 Hz
Power consumption	70 W (standby: 0.7 W)
Total output power (Amplifier)	Home theater mode: 1000 W FTC* output power: 700 W *(Main Ch @ 1 kHz within 10% THD, Sub Ch 60 Hz within 2.5% THD)
Dimensions (width x height x depth)	435 x 59 x 297 mm
Weight	Total weight: 12.50 kg Main unit: 3.70 kg
Operating temperature	5°C to 40°C
Operating humidity	Less than 80 % (no condensation)

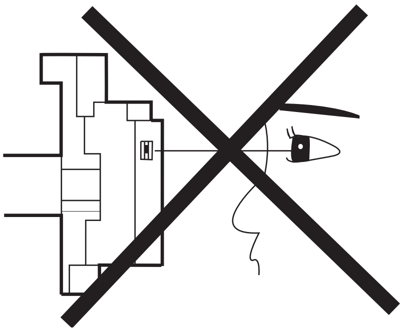
	Terminals	
Front	**SD card slot** slot x 1	
	MP3 LINE-IN jack mini jack x 1	500 mVp-p (75Ω)
Rear	**Analogue audio output (SPEAKERS (4Ω))**	
	front and rear speakers	System: Full range satellite Impedance: 4Ω Frequency response: 180 Hz ~ 20 kHz Dimensions: 100 x 130 x 100.5 mm Weight: front - 0.54 kg rear - 0.51 kg
	centre speaker	System: Full range satellite Impedance: 4Ω Frequency response: 180 Hz ~ 20 kHz Dimensions: 100 x 130 x 100.5 mm Weight: 0.73 kg
	subwoofer	Impedance: 4Ω Speaker drivers: 160 mm woofer Frequency response: 60 Hz ~ 150 Hz Dimensions: 149.5 x 310.5 x 308 mm Weight: 3.76 kg
	Video output RCA jack x 1	1 Vp-p (75Ω)
	Component video output RCA jack x 3	Y: 1 Vp-p (75Ω) P_B: 700 mVp-p (75Ω) P_R: 700 mVp-p (75Ω)
	Analogue audio input (AUX) RCA jack x 2	L/R:2 Vrms (47kΩ)
	Digital audio input (Coaxial) RCA jack x 1	500 mVp-p (75Ω)
	HDMI output HDMI jack x 1	Video: 480p/576p, 720p, 1080i, 1080p, 1080p24 / Audio
	LAN terminal	10BASE-T / 100BASE-TX
	RADIO FM ANT jack × 1	Tuning range: FM 87.5 - 108 MHz (100kHz) Antenna terminal: 75Ω (unbalanced)

Note

- The specifications and design of this product are subject to change without notice.

LASER BEAM SAFETY PRECAUTIONS

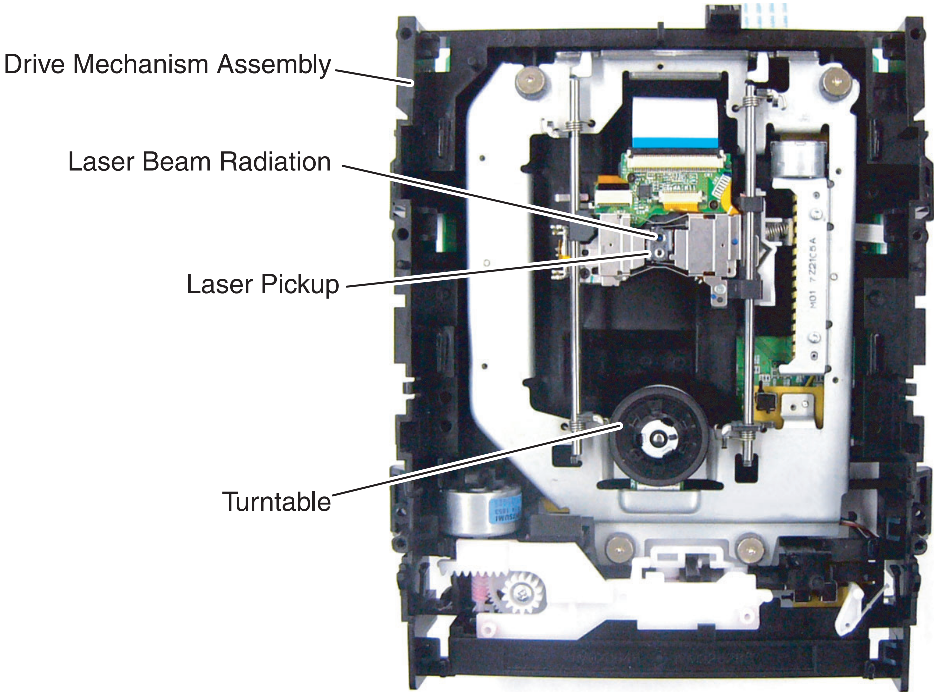
This BD player uses a pickup that emits a laser beam.

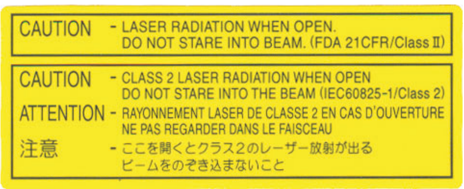


Do not look directly at the laser beam coming from the pickup or allow it to strike against your skin.

The laser beam is emitted from the location shown in the figure. When checking the laser diode, be sure to keep your eyes at least 30 cm away from the pickup lens when the diode is turned on. Do not look directly at the laser beam.

CAUTION: Use of controls and adjustments, or doing procedures other than those specified herein, may result in hazardous radiation exposure.





CAUTION - LASER RADIATION WHEN OPEN.
DO NOT STARE INTO BEAM. (FDA 21CFR/Class II)

CAUTION - CLASS 2 LASER RADIATION WHEN OPEN
DO NOT STARE INTO THE BEAM (IEC60825-1/Class 2)
ATTENTION - RAYONNEMENT LASER DE CLASSE 2 EN CAS D'OUVERTURE
NE PAS REGARDER DANS LE FAISCEAU
注意 - ここを開くとクラス2のレーザー放射が出る
ビームをのぞき込まないこと

Location: Inside Top of BD mechanism.

IMPORTANT SAFETY PRECAUTIONS

Product Safety Notice

Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by a ⚠ on schematics and in parts lists. Use of a substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire, and/or other hazards. The Product's Safety is under review continuously and new instructions are issued whenever appropriate. Prior to shipment from the factory, our products are carefully inspected to confirm with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

Precautions during Servicing

A. Parts identified by the ⚠ symbol are critical for safety. Replace only with part number specified.

B. In addition to safety, other parts and assemblies are specified for conformance with regulations applying to spurious radiation. These must also be replaced only with specified replacements. Examples: RF converters, RF cables, noise blocking capacitors, and noise blocking filters, etc.

C. Use specified internal wiring. Note especially:
  1) Wires covered with PVC tubing
  2) Double insulated wires
  3) High voltage leads

D. Use specified insulating materials for hazardous live parts. Note especially:
  1) Insulation tape
  2) PVC tubing
  3) Spacers
  4) Insulators for transistors

E. When replacing AC primary side components (transformers, power cord, etc.), wrap ends of wires securely about the terminals before soldering.

F. Observe that the wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.).

G. Check that replaced wires do not contact sharp edges or pointed parts.

H. When a power cord has been replaced, check that 5 - 6 kg of force in any direction will not loosen it.

I. Also check areas surrounding repaired locations.

J. Be careful that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

K. When connecting or disconnecting the internal connectors, first, disconnect the AC plug from the AC outlet.

L. When reassembling, be sure to use the original screws or specified screws listed in the parts list.

Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts, and wires have been returned to their original positions. Afterwards, do the following tests and confirm the specified values to verify compliance with safety standards.

1. Clearance Distance

When replacing primary circuit components, confirm specified clearance distance (d) and (d') between soldered terminals, and between terminals and surrounding metallic parts. (See Fig. 1)

Table 1 : Ratings for selected area

AC Line Voltage	Clearance Distance (d), (d')
230 V	≥ 3.2 mm(d) ≥ 6.0 mm(d')

Note: This table is unofficial and for reference only. Be sure to confirm the precise values.

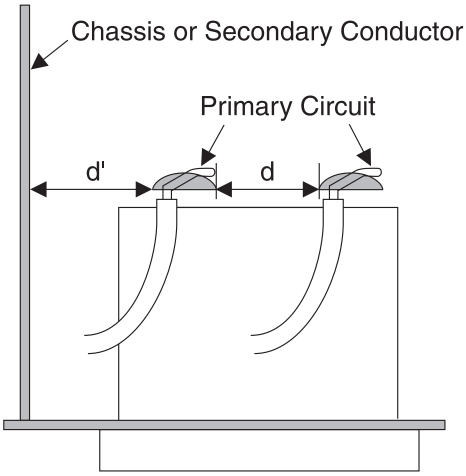


Fig. 1

2. Leakage Current Test

Confirm the specified (or lower) leakage current between B (earth ground, power cord plug prongs) and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.) is lower than or equal to the specified value in the table below.

Measuring Method (Power ON) :

Insert load Z between B (earth ground, power cord plug prongs) and exposed accessible parts. Use an AC voltmeter to measure across the terminals of load Z. See Fig. 2 and the following table.

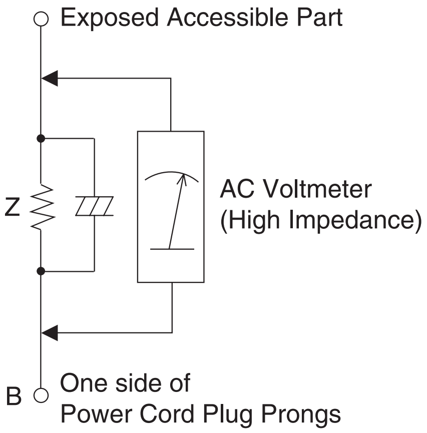


Fig. 2

Table 2: Leakage current ratings for selected areas

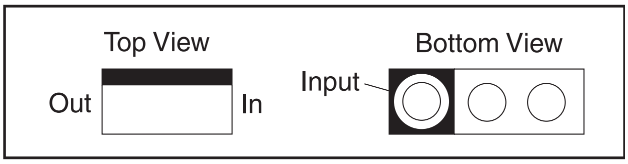
AC Line Voltage	Load Z	Leakage Current (i)	One side of power cord plug prongs (B) to:
230 V	2kΩ RES. Connected in parallel	i≤0.7mA AC Peak i≤2mA DC	RF or Antenna terminals
	50kΩ RES. Connected in parallel	i≤0.7mA AC Peak i≤2mA DC	A/V Input, Output

Note: This table is unofficial and for reference only. Be sure to confirm the precise values.

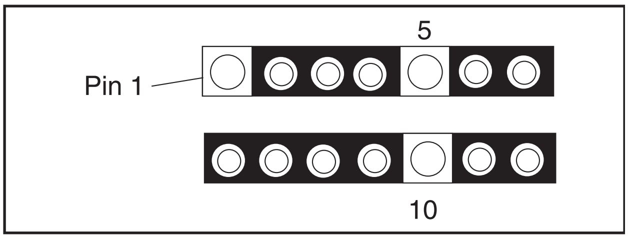
STANDARD NOTES FOR SERVICING

Circuit Board Indications

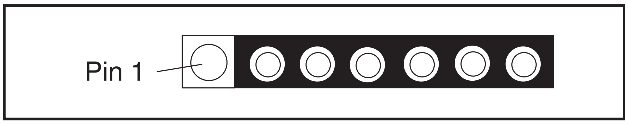
1. The output pin of the 3 pin Regulator ICs is indicated as shown.



2. For other ICs, pin 1 and every fifth pin are indicated as shown.

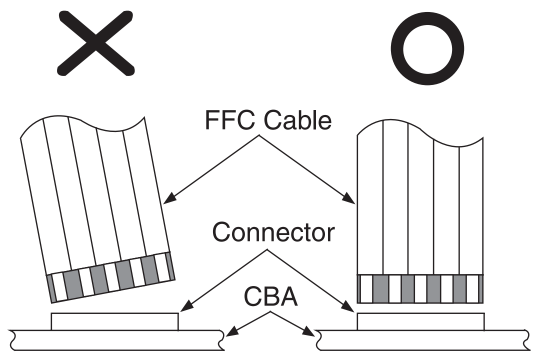


3. The 1st pin of every male connector is indicated as shown.



Instructions for Connectors

1. When you connect or disconnect the FFC (Flexible Foil Connector) cable, be sure to first disconnect the AC cord.
2. FFC (Flexible Foil Connector) cable should be inserted parallel into the connector, not at an angle.



* Be careful to avoid a short circuit.

Pb (Lead) Free Solder

When soldering, be sure to use the Pb free solder.

How to Remove / Install Flat Pack-IC

1. Removal

With Hot-Air Flat Pack-IC Desoldering Machine:

1. Prepare the hot-air flat pack-IC desoldering machine, then apply hot air to the Flat Pack-IC (about 5 to 6 seconds). (Fig. S-1-1)

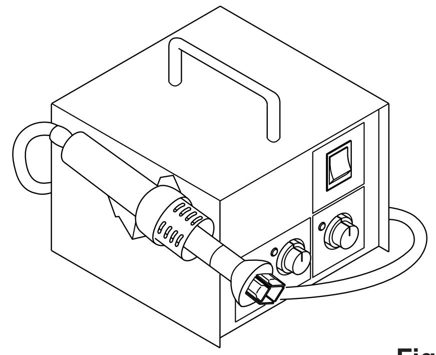


Fig. S-1-1

2. Remove the flat pack-IC with tweezers while applying the hot air.
3. Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
4. Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

CAUTION:

1. The Flat Pack-IC shape may differ by models. Use an appropriate hot-air flat pack-IC desoldering machine, whose shape matches that of the Flat Pack-IC.
2. Do not supply hot air to the chip parts around the flat pack-IC for over 6 seconds because damage to the chip parts may occur. Put masking tape around the flat pack-IC to protect other parts from damage. (Fig. S-1-2)

3. The flat pack-IC on the CBA is affixed with glue, so be careful not to break or damage the foil of each pin or the solder lands under the IC when removing it.

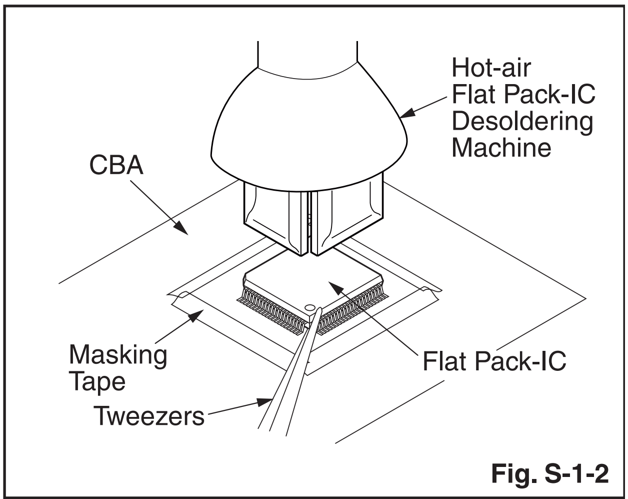

Hot-air
Flat Pack-IC
Desoldering
Machine
CBA
Masking
Tape
Tweezers
Flat Pack-IC

Fig. S-1-2

With Soldering Iron:

1. Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)

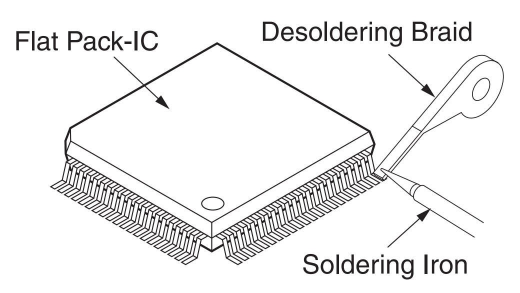

Flat Pack-IC
Desoldering Braid
Soldering Iron

Fig. S-1-3

2. Lift each lead of the flat pack-IC upward one by one, using a sharp pin or wire to which solder will not adhere (iron wire). When heating the pins, use a fine tip soldering iron or a hot air desoldering machine. (Fig. S-1-4)

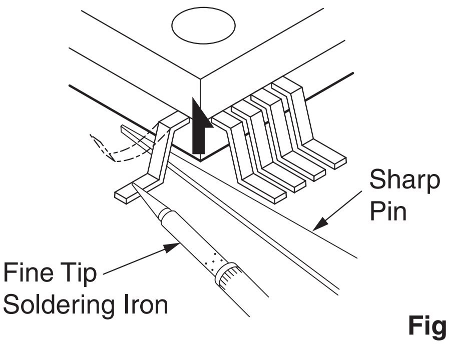

Sharp
Pin
Fine Tip
Soldering Iron

Fig. S-1-4

3. Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
4. Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

With Iron Wire:

1. Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)
2. Affix the wire to a workbench or solid mounting point, as shown in Fig. S-1-5.
3. While heating the pins using a fine tip soldering iron or hot air blower, pull up the wire as the solder melts so as to lift the IC leads from the CBA contact pads as shown in Fig. S-1-5.
4. Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
5. Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

Note: When using a soldering iron, care must be taken to ensure that the flat pack-IC is not being held by glue. When the flat pack-IC is removed from the CBA, handle it gently because it may be damaged if force is applied.

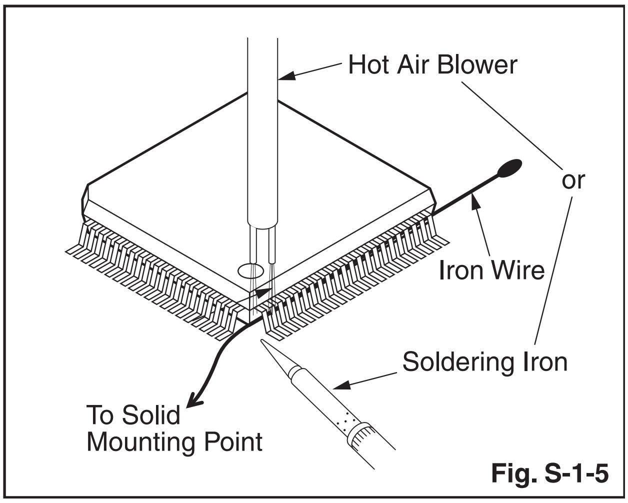


Fig. S-1-5

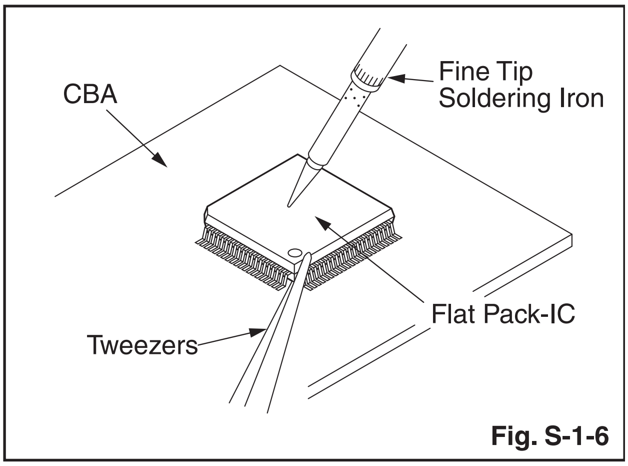
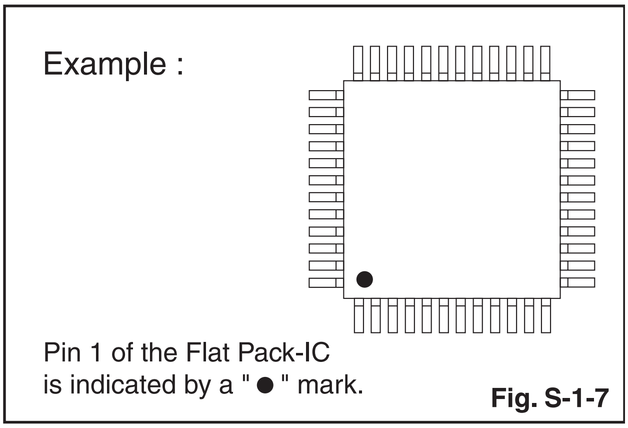


Fig. S-1-6

2. Installation

1. Using desoldering braid, remove the solder from the foil of each pin of the flat pack-IC on the CBA so you can install a replacement flat pack-IC more easily.
2. The " ● " mark on the flat pack-IC indicates pin 1. (See Fig. S-1-7.) Be sure this mark matches the pin 1 on the PCB when positioning for installation. Then presolder the four corners of the flat pack-IC. (See Fig. S-1-8.)
3. Solder all pins of the flat pack-IC. Be sure that none of the pins have solder bridges.



Pin 1 of the Flat Pack-IC
is indicated by a " ● " mark.

Fig. S-1-7

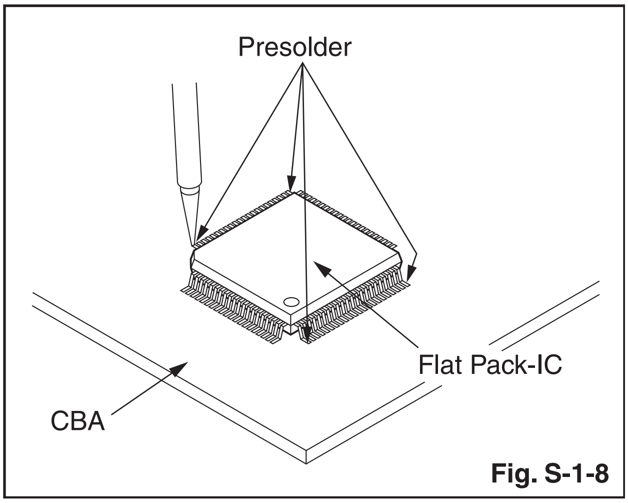


Fig. S-1-8

Instructions for Handling Semi-conductors

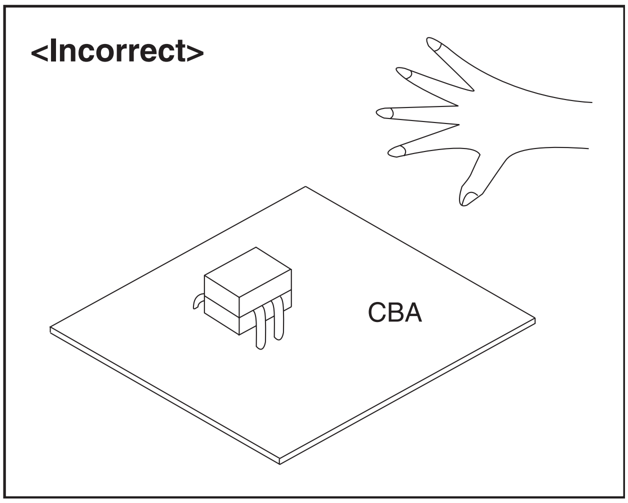
Electrostatic breakdown of the semi-conductors may occur due to a potential difference caused by electrostatic charge during unpacking or repair work.

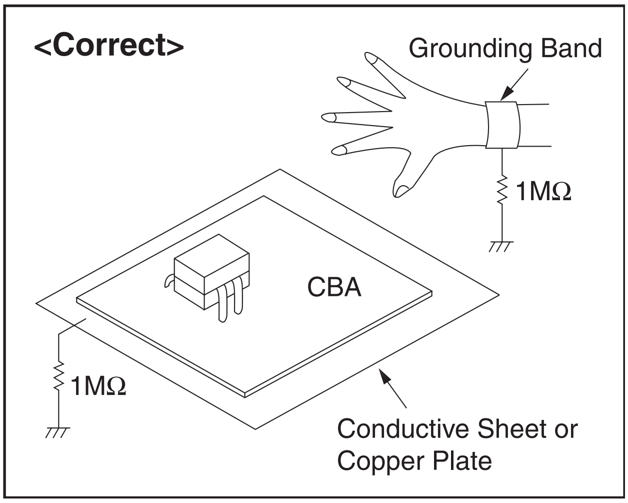
1. Ground for Human Body

Be sure to wear a grounding band (1 MΩ) that is properly grounded to remove any static electricity that may be charged on the body.

2. Ground for Workbench

Be sure to place a conductive sheet or copper plate with proper grounding (1 MΩ) on the workbench or other surface, where the semi-conductors are to be placed. Because the static electricity charge on clothing will not escape through the body grounding band, be careful to avoid contacting semi-conductors with your clothing.

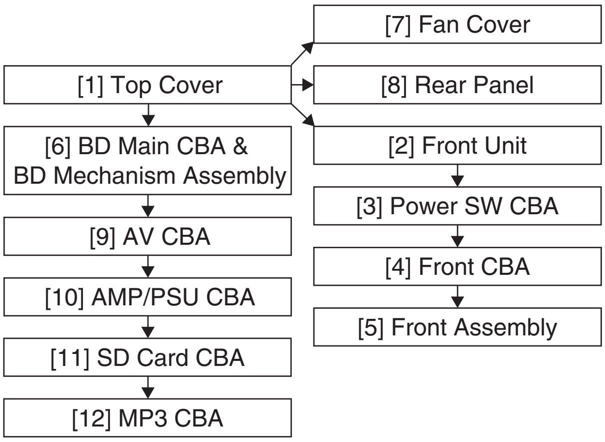




CABINET DISASSEMBLY INSTRUCTIONS

1. Disassembly Flowchart

This flowchart indicates the disassembly steps to gain access to item(s) to be serviced. When reassembling, follow the steps in reverse order. Bend, route, and dress the cables as they were originally.


[7] Fan Cover
[1] Top Cover
[8] Rear Panel
[6] BD Main CBA & BD Mechanism Assembly
[2] Front Unit
[3] Power SW CBA
[9] AV CBA
[4] Front CBA
[10] AMP/PSU CBA
[5] Front Assembly
[11] SD Card CBA
[12] MP3 CBA

2. Disassembly Method

ID/ Loc. No.	Part	Removal		
		Fig. No.	**Remove/*Unhook/ Unlock/Release/ Unplug/Desolder**	**Note**
[1]	Top Cover	D1	8(S-1)	---
[2]	Front Unit	D2	*5(L-1), *3(L-2), *CN3001	1
[3]	Power SW CBA	D3	(S-2), 5(S-3), *CN3002	---
[4]	Front CBA	D3	---------------	---
[5]	Front Assembly	D3	---------------	---
[6]	BD Main CBA & BD Mechanism Assembly	D4	(S-4), 4(S-5), 2(S-6), *CN404, *CN6101, *CN7001, M-PCB Plate Earth, Locking Card Spacer	2
[7]	Fan Cover	D5	(S-7), *CN5001, Fan Earth Plate	---
[8]	Rear Panel	D5	3(S-8), 2(S-9), (S-10), 2(S-11)	3
[9]	AV CBA	D6	2(S-12), *CN402, *CN403	---
[10]	AMP/PSU CBA	D6	5(S-13), *CN9002, PCB Bracket Front	---
[11]	SD Card CBA	D7	2(S-14)	---
[12]	MP3 CBA	D7	(S-15)	---

↓ ↓ ↓ ↓ ↓

(1) (2) (3) (4) (5)

Note:

(1) Identification (location) No. of parts in the figures

(2) Name of the part

(3) Figure Number for reference

(4) Identification of parts to be removed, unhooked, unlocked, released, unplugged, unclamped, or desoldered.
P = Spring, L = Locking Tab, S = Screw,
CN = Connector
* = Unhook, Unlock, Release, Unplug, or Desolder
e.g. 2(S-2) = two Screws (S-2),
2(L-2) = two Locking Tabs (L-2)

(5) Refer to "Reference Notes."

Reference Notes

1. **CAUTION 1:** Locking Tabs (L-1) and (L-2) are fragile. Be careful not to break them.
2. **The BD Main CBA & BD Mechanism Assembly is adjusted as a unit at factory. Therefore, do not disassemble it. Replace the BD Main CBA & BD Mechanism Assembly as a unit.**
3. **When reassembling, be sure to use the original screws or specified screws listed in the parts list.**

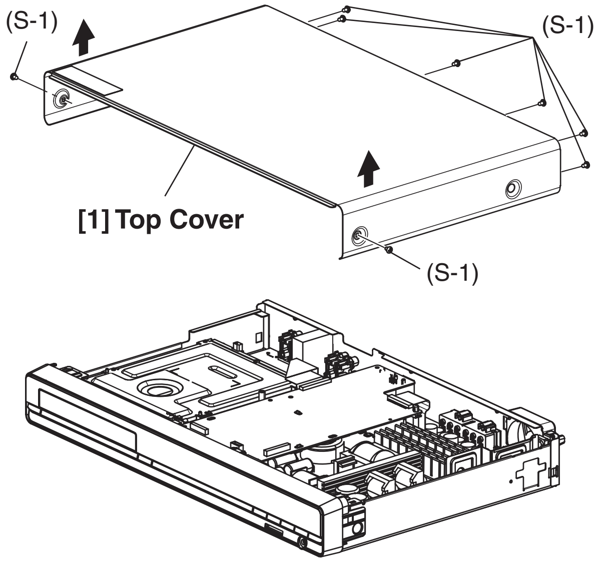

(S-1)
(S-1)
[1] Top Cover
(S-1)

Fig. D1

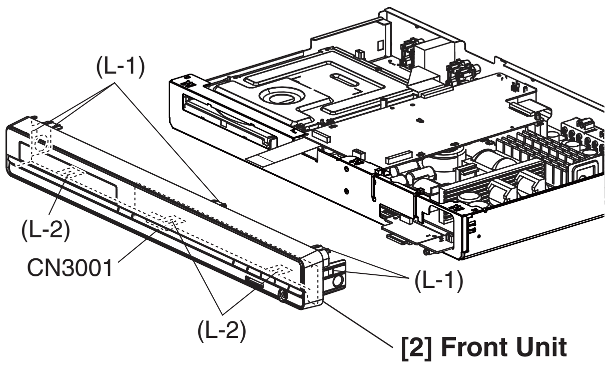

(L-1)
(L-2)
CN3001
(L-1)
(L-2)
[2] Front Unit

Fig. D2

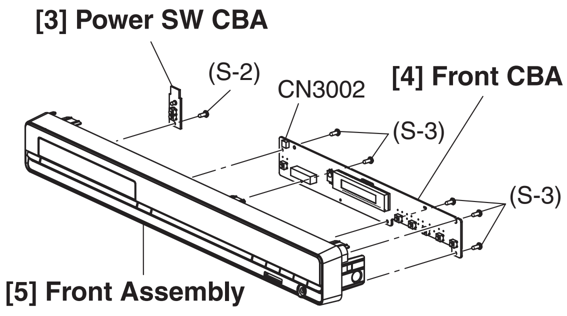
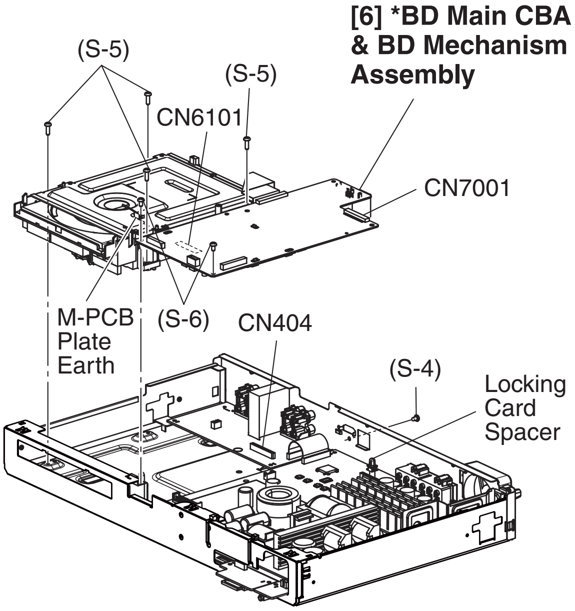
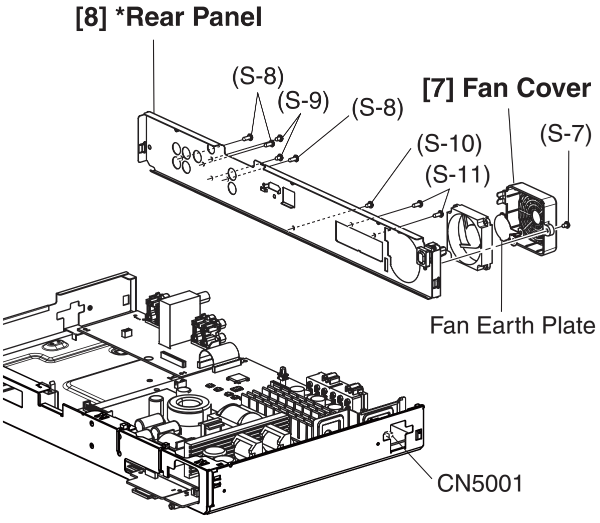

[3] Power SW CBA
(S-2)
CN3002
[4] Front CBA
(S-3)
(S-3)
[5] Front Assembly

Fig. D3


[6] *BD Main CBA & BD Mechanism Assembly
(S-5)
(S-5)
CN6101
CN7001
M-PCB Plate Earth
(S-6)
CN404
(S-4)
Locking Card Spacer

* See Reference Note 2.

Fig. D4


[8] *Rear Panel
(S-8)
(S-9)
(S-8)
[7] Fan Cover
(S-10)
(S-7)
(S-11)
Fan Earth Plate
CN5001

* See Reference Note 3.

Fig. D5

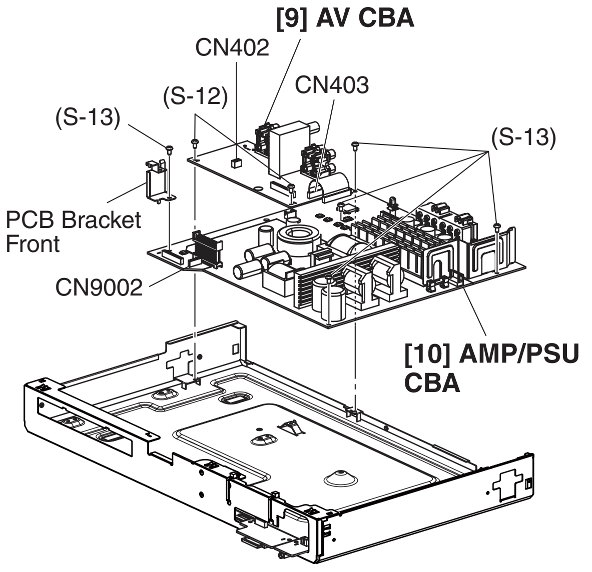

[9] AV CBA
CN402
CN403
(S-12)
(S-13)
(S-13)
PCB Bracket Front
CN9002
[10] AMP/PSU CBA

Fig. D6

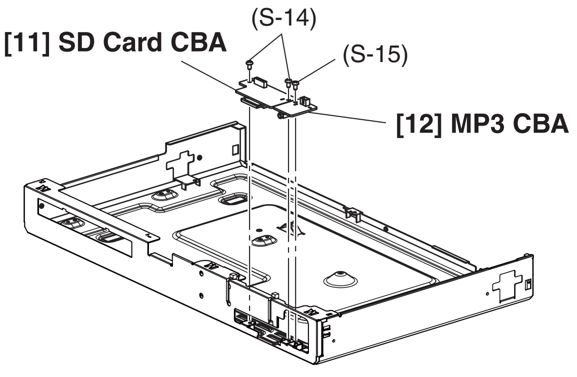

(S-14)
[11] SD Card CBA
(S-15)
[12] MP3 CBA

Fig. D7

3. How to Eject a Disc

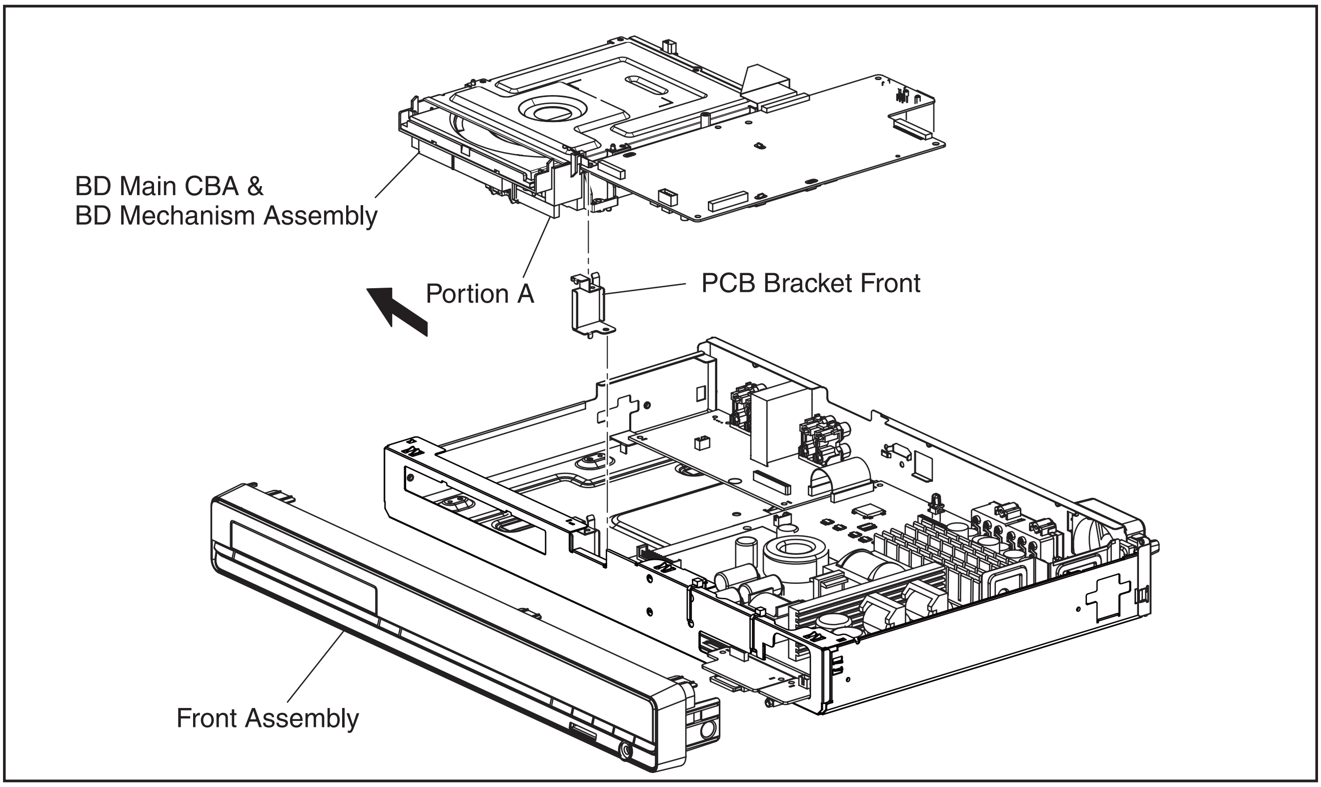
When a disc cannot be removed due to malfunction or when an unplayable disc is inserted, follow the procedure below to remove the disc.

Procedure A

1. Unplug the AC power cord and then plug it in.
2. Turn the power on by pressing the [OPEN/CLOSE] button and the disc tray will open automatically.

Procedure B

1. Remove the Top Cover, Front Assembly, BD Main CBA & BD Mechanism Assembly and PCB Bracket Front.
2. Slide the portion A in the direction of the arrow.
3. Pull the tray out manually and remove the disc.

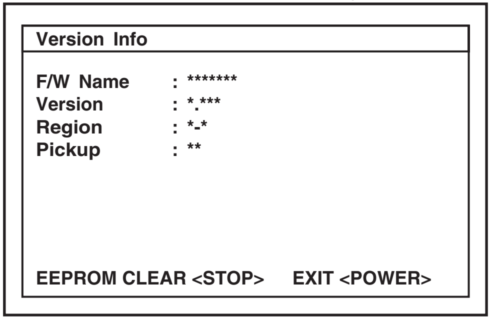

BD Main CBA &
BD Mechanism Assembly
Portion A
PCB Bracket Front
Front Assembly

HOW TO INITIALIZE THE BLU-RAY DISC HOME THEATER

To put the program back at the factory-default, initialize the BD player as the following procedure.

1. Turn the power on.
2. Remove the disc on the tray and close the tray.
3. Press [1], [2], [3], [4], and [DISPLAY] buttons on the remote control unit in that order.
   Fig. a appears on the screen. All VFD lights.

"*******" differ depending on the models.



Version Info

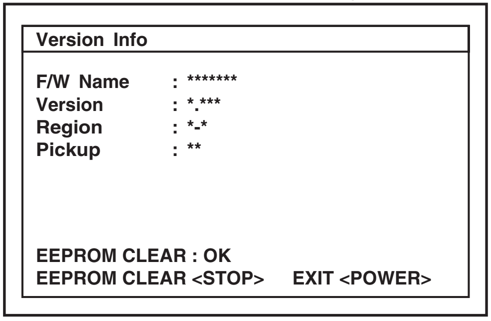
F/W Name : *****
Version : *.***
Region : *-*
Pickup : ****

EEPROM CLEAR <STOP> EXIT <POWER>

Fig. a

4. Press [■] button on the remote control unit.
   Fig. b appears on the screen and Fig. c appears on the VFD.

"*******" differ depending on the models.



Version Info

F/W Name : *****
Version : *.***
Region : *-*
Pickup : ****

**EEPROM CLEAR : OK
EEPROM CLEAR <STOP> EXIT <POWER>**

Fig. b

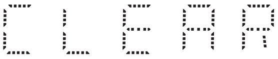


Fig. c

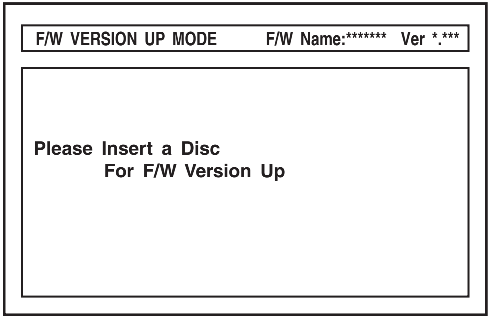
5. To exit this mode, press [⏻] button.

FIRMWARE RENEWAL MODE

Note: The file extension of the available firmware is “b30”.

1. Turn the power on and remove the disc on the tray and close the tray.
2. To put the BD player into version up mode, press [9], [8], [7], [6], and [POP MENU/MENU] buttons on the remote control unit in that order. The tray will open automatically.
   Fig. a appears on the screen and Fig. b appears on the VFD.

"*******" differ depending on the models.



F/W VERSION UP MODE F/W Name:******* Ver *.***

Please Insert a Disc
For F/W Version Up

Fig. a Version Up Mode Screen

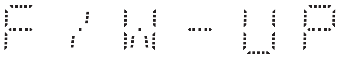
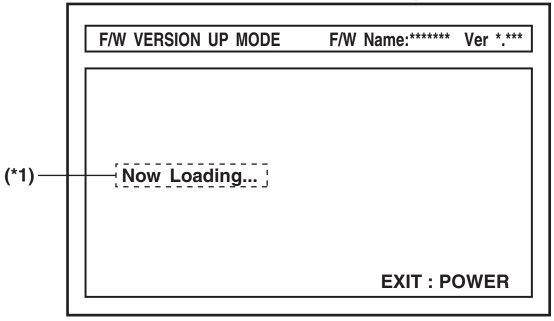


Fig. b VFD in Version Up Mode

3. Load the disc for version up.
4. The BD player enters the F/W version up mode automatically. Fig. c appears on the screen and Fig. d appears on the VFD. Make sure to insert the proper F/W for the state of this model.

"*******" differ depending on the models.



F/W VERSION UP MODE F/W Name:******* Ver *.***

(*1) Now Loading...

EXIT : POWER

Fig. c Programming Mode Screen (Example)

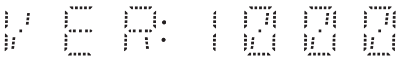
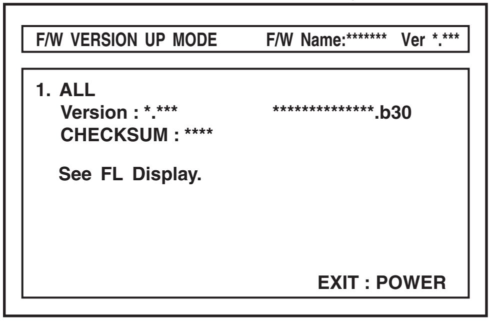


Fig. d VFD in Programming Mode (Example)

The appearance shown in (*1) of Fig. c is described as follows:

No.	Appearance	State
1	Now Loading...	Loading the disc
2	Reading...	Sending files into the memory.
3	See FL Display.	Writing new version data, the progress will be displayed as shown in Fig. f.

"*******" differ depending on the models.



F/W VERSION UP MODE F/W Name:******* Ver *.***

1. ALL
   Version : *.*** **************.b30
   CHECKSUM : ****

   See FL Display.

EXIT : POWER

Fig. e Version Up Mode

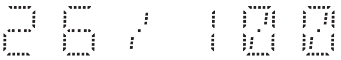


Fig. f VFD in Version Up Mode

5. After programming is finished, the checksum on the VFD (Fig. g).

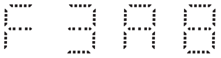


Fig. g VFD upon Finishing the Programming Mode (Example)

Checksum appears on the VFD then the tray will open automatically. Remove the disc on the tray.

At this time, no button is available.

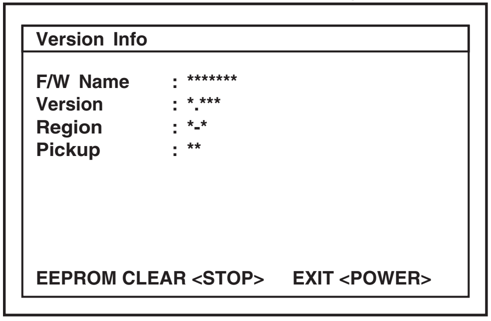
6. Unplug the AC cord from the AC outlet. Then plug it again.
7. Turn the power on.

Note: All the settings will be put back to factory-default.

How to Verify the Firmware Version

1. Turn the power on.
2. Remove the disc on the tray and close the tray.
3. Press [1], [2], [3], [4], and [DISPLAY] buttons on the remote control unit in that order.
   Fig. h appears on the screen. All VFD lights.

"*******" differ depending on the models.



Version Info

F/W Name : *******
Version : *.***
Region : *-*
Pickup : **

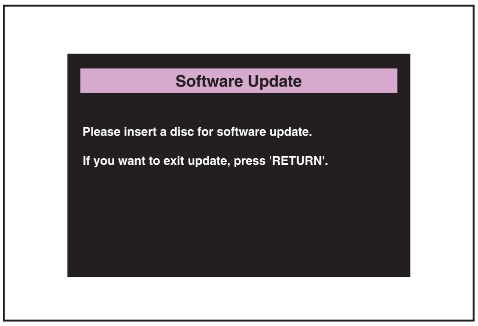
EEPROM CLEAR <STOP> EXIT <POWER>

Fig. h

4. To exit this mode, press [⏻] button.

FIRMWARE RENEWAL MODE (for User)

1. Press [SETUP] button to display Setup menu.
2. Select Custom - Others - Software Update - Disc Update.
3. The screen appears in Fig. a when “Yes” is chosen and the tray opens. Insert the disc and press [⏏] button.

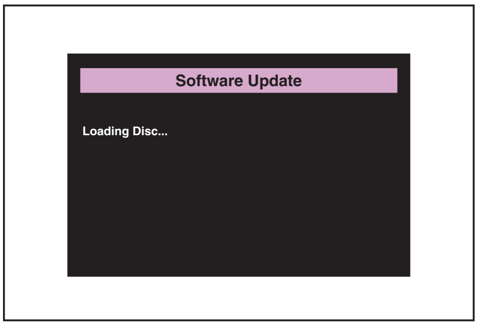

Software Update

Please insert a disc for software update.

If you want to exit update, press 'RETURN'.

Fig. a

4. Disc loading starts. Fig. b will appear on the screen and Fig. c appears on the VFD.

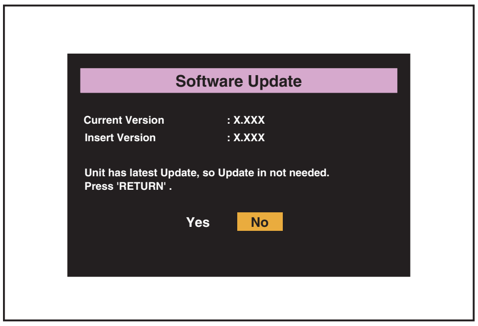

Software Update

Loading Disc...

Fig. b

Fig. c VFD in Update Mode

5. Fig. d will appear on the screen, then select “Yes”. Fig. e will appears on the VFD.


Software Update

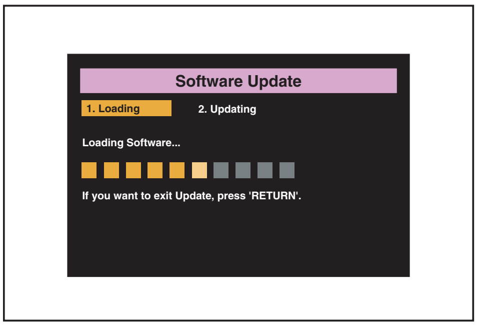
Current Version : X.XXX
Insert Version : X.XXX

Unit has latest Update, so Update in not needed.
Press 'RETURN' .

Fig. d

Fig. e VFD in Update Mode

6. Firmware loading starts. Fig. f will appear on the screen and Fig. g appears on the VFD.


Software Update

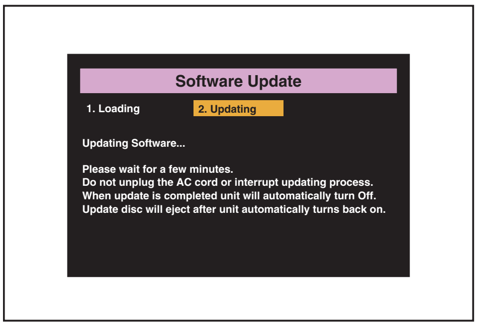
Loading Software...

If you want to exit Update, press 'RETURN'.

Fig. f

Fig. g VFD in Update Mode

7. Updating starts automatically. Fig. h will appear on the screen and update progress will be displayed as shown in Fig. i on the VFD.


Software Update

Updating Software...

Please wait for a few minutes.
Do not unplug the AC cord or interrupt updating process.
When update is completed unit will automatically turn Off.
Update disc will eject after unit automatically turns back on.

Fig. h

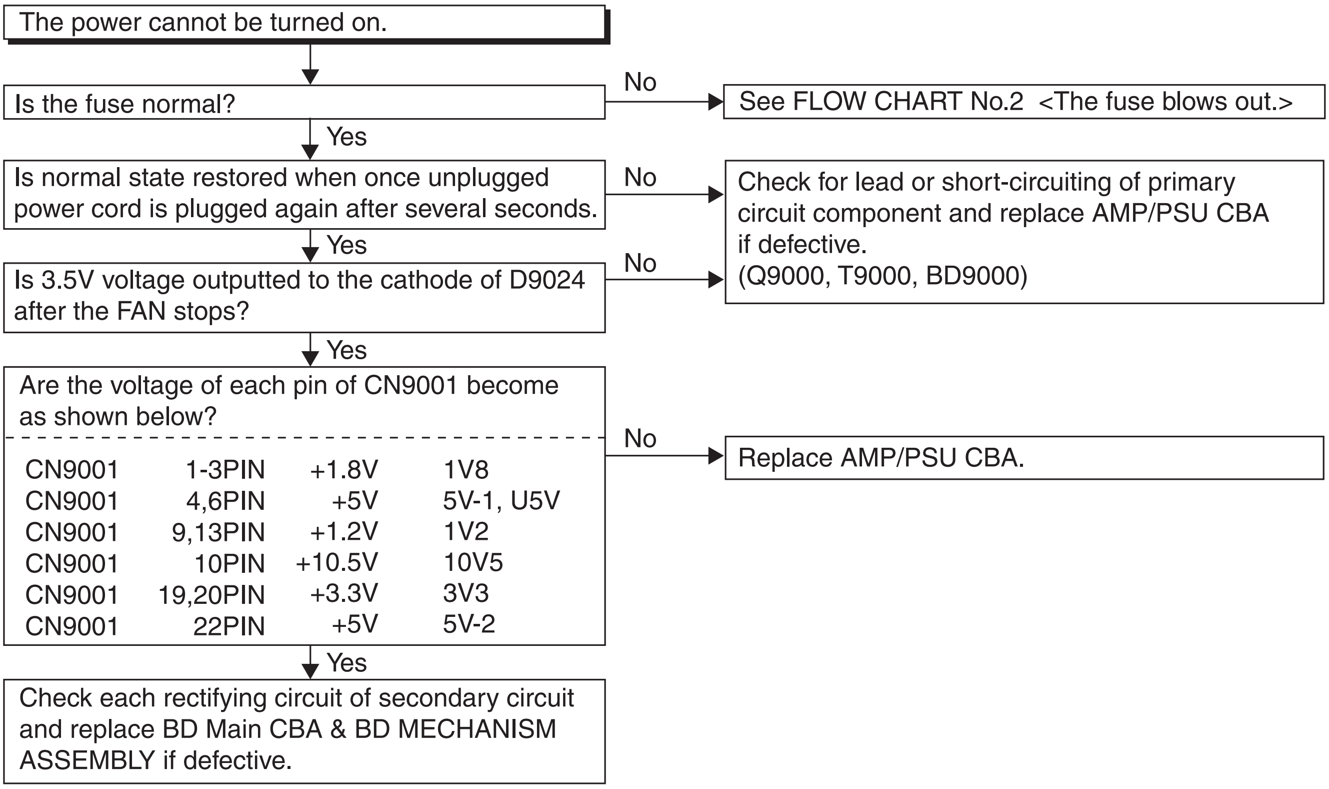
Fig. i VFD in Update Mode

8. “GOODBYE” on the VFD and power turns off automatically when it finishes.
9. The power turns on and the tray will open automatically. Remove the disc on the tray.

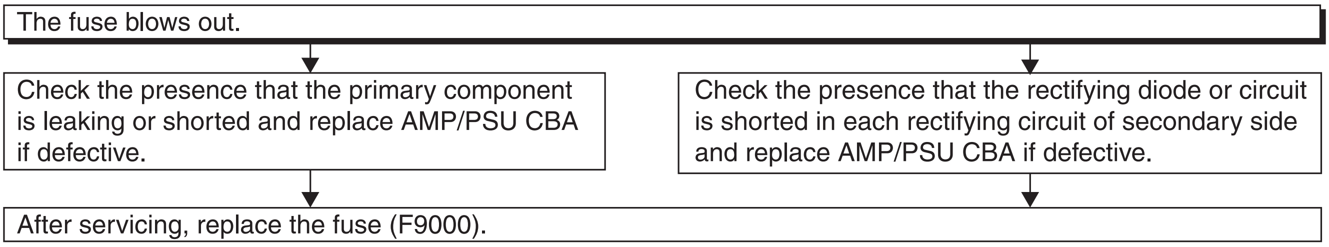
Note: The setup setting configured before the update will be kept.

TROUBLESHOOTING

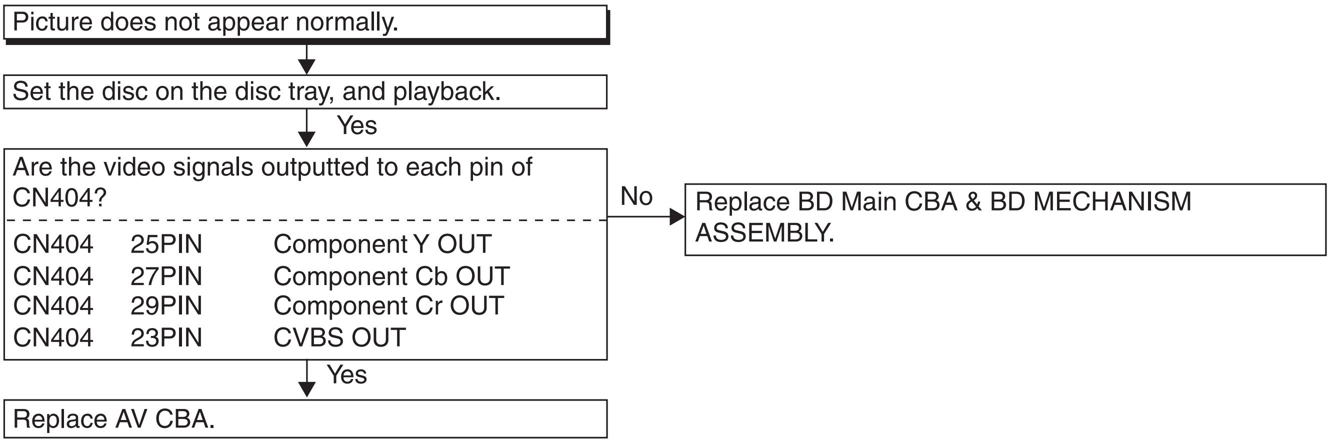
FLOW CHART NO.1


The power cannot be turned on.
Is the fuse normal?
No
See FLOW CHART No.2 <The fuse blows out.>
Yes
Is normal state restored when once unplugged power cord is plugged again after several seconds.
No
Check for lead or short-circuiting of primary circuit component and replace AMP/PSU CBA if defective. (Q9000, T9000, BD9000)
Yes
Is 3.5V voltage outputted to the cathode of D9024 after the FAN stops?
No
Yes
Are the voltage of each pin of CN9001 become as shown below?
CN9001 1-3PIN +1.8V 1V8
CN9001 4,6PIN +5V 5V-1, U5V
CN9001 9,13PIN +1.2V 1V2
CN9001 10PIN +10.5V 10V5
CN9001 19,20PIN +3.3V 3V3
CN9001 22PIN +5V 5V-2
No
Replace AMP/PSU CBA.
Yes
Check each rectifying circuit of secondary circuit and replace BD Main CBA & BD MECHANISM ASSEMBLY if defective.

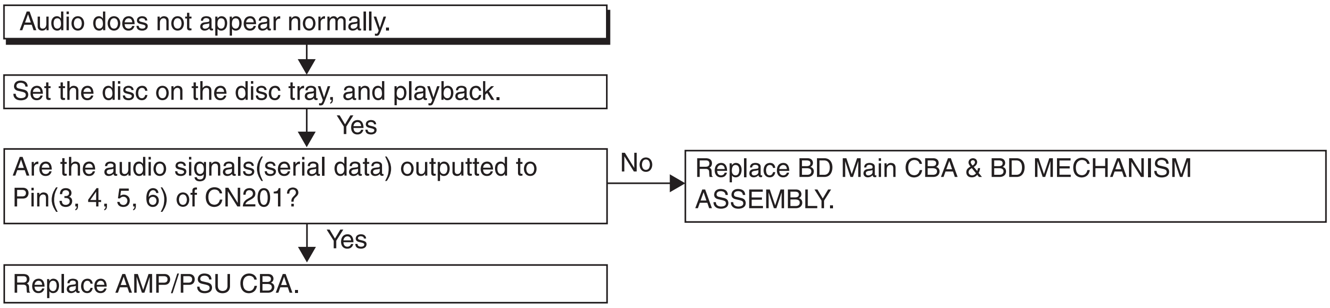
FLOW CHART NO.2


The fuse blows out.
Check the presence that the primary component is leaking or shorted and replace AMP/PSU CBA if defective.
Check the presence that the rectifying diode or circuit is shorted in each rectifying circuit of secondary side and replace AMP/PSU CBA if defective.
After servicing, replace the fuse (F9000).

FLOW CHART NO.3

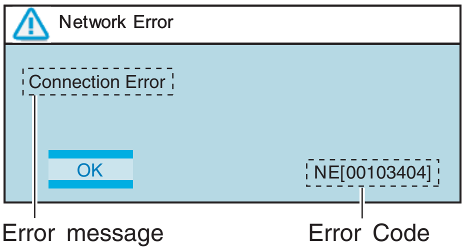

Picture does not appear normally.
Set the disc on the disc tray, and playback.
Yes
Are the video signals outputted to each pin of CN404?
CN404 25PIN Component Y OUT
CN404 27PIN Component Cb OUT
CN404 29PIN Component Cr OUT
CN404 23PIN CVBS OUT
No
Replace BD Main CBA & BD MECHANISM ASSEMBLY.
Yes
Replace AV CBA.

FLOW CHART NO.4


Audio does not appear normally.
Set the disc on the disc tray, and playback.
Yes
Are the audio signals(serial data) outputted to Pin(3, 4, 5, 6) of CN201?
No
Replace BD Main CBA & BD MECHANISM ASSEMBLY.
Yes
Replace AMP/PSU CBA.

INTERNET RADIO (vTuner) ERROR CODE

Error Code appears in the error screen when the unit detects an error, as shown below. The code is used to specifically determine the cause of error.



Network Error

Connection Error

NE[00103404]

Fig. 1: Error Code (Example)

Error Code are displayed with “NE[********]” (“*” is error code) as shown above.

Error Code Form

In the Internet Radio(vTuner), Error Code are used as follows.

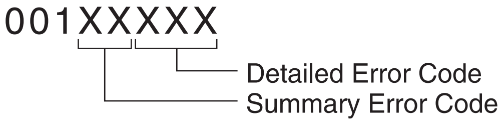


Fig. 2

“Summary Error Code” are shown in the list below.

Summary Error Code	Error message
01	LAN feature is invalid.
02	Playback Error
03	Connection Error

- The Detailed Error Code shows the three-digit code used in the HTTP Status Code or used internally in the Application.
- The HTTP Status Codes (200 to 500 series) are defined in the RFC2616.
- Depending on the specification of the station or the server, error codes not listed in the table may appear.

Detailed Error Code table (vTuner – HTTP Status Code)

Status Code	Description
201 Created	A new resource was created by this unit’s request.
202 Accepted	This unit’s request was accepted but its processing is not completed.
204 No Content	Though the server processed the request, there was no content.
304 Not Modified	This unit caches latest resource and the requested resource is not modified. (exception protocol error)
400 Bad Request	The server cannot understand this unit’s request.
401 Unauthorized	The resource this unit has requested needs to be authorized.
403 Forbidden	The server has received the requests from this unit but refused to process them.
404 Not Found	The URI this unit has requested is not found.
500 Internal Server Error	Internal server error occurred.
501 Not Implemented	The server does not support functionalities required to process the request from this unit.
502 Bad Gateway	The proxy server between this unit and the server received an invalid reply from another proxy or the original server.
503 Service Unavailable	Because of overloading or maintenance, the server is temporarily unavailable.

Detailed Error Code table (vTuner – Application Status Code)

Status Code	Description
001 Nothing List	As a result of list creation process, there is no item to be displayed from the received data.
002 LAN Disconnect	This unit’s LAN is disconnected.
005 Favorite Error	The URL needed to register or delete favorite data is not sent from the server.
601 Stream Stop	Because the streaming stopped, decoding has stopped. (This error message is displayed if decoding is disabled for 20 seconds.)
602 Unsupported(Info)	The stream information of the broadcast is unsupported.
603 Decode Timeout	The unit tried to playback the received stream data, but the data was not played correctly even after three minutes elapsed.
604 Unsupported(Stream)	As a result of analyzing the received stream data, the data is unsupported.
605 Decode Failed	The received stream data cannot be decoded.
606 Multi Stream	Because this unit received multiple streaming data, the data cannot be decoded.
701 Protocol Error	An exception error occurred during communication between the server or the broadcast.
702 Start Up Error	The application of this unit failed to start.

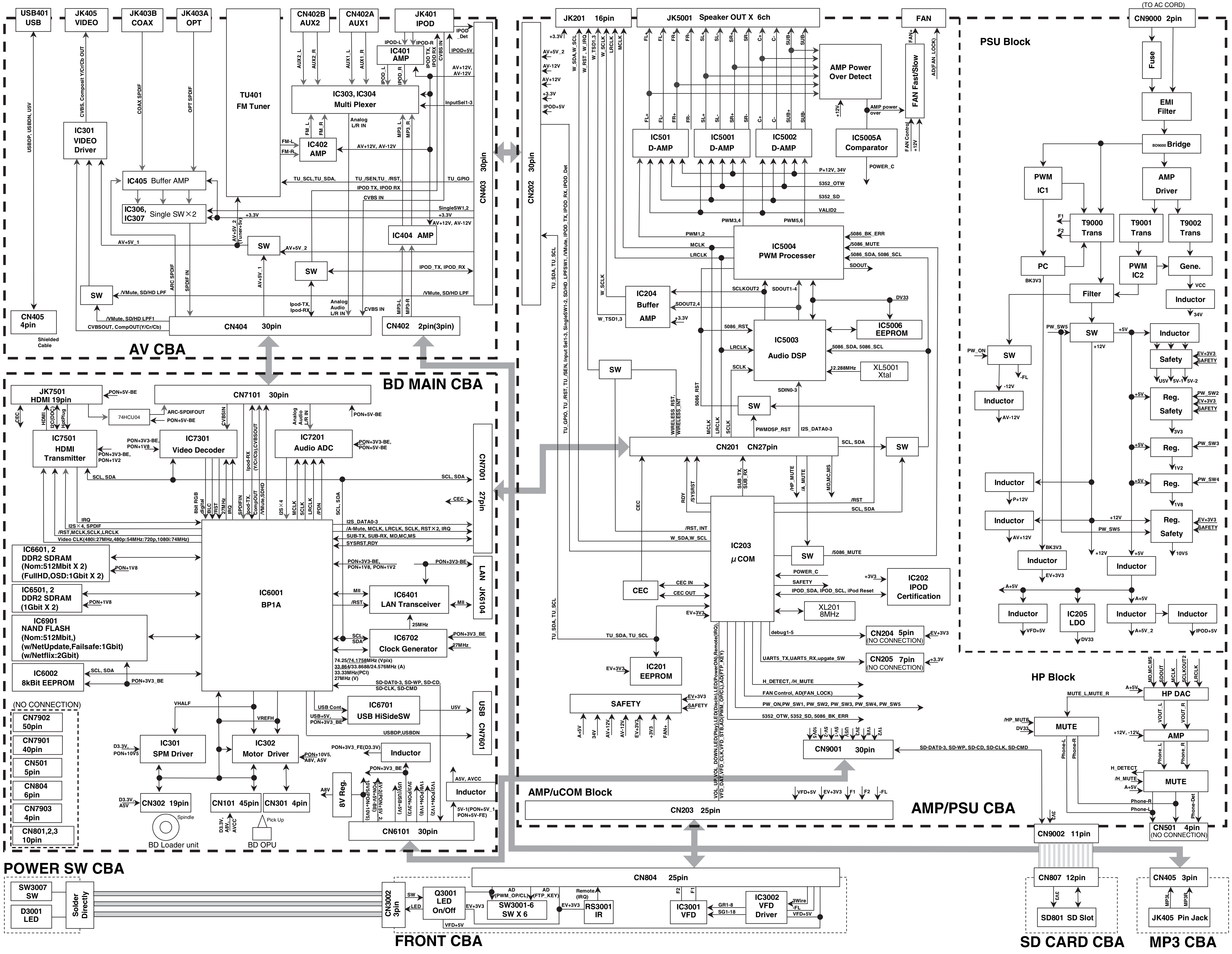
Status Code	Description
703 URL Error	The URL which this unit specified is in invalid form.
705 Connect Failed	Connection with the proxy which exists between this unit and the server or the broadcast has failed. (IP conversion error)
706 Connect Failed	Connection with the server or the broadcast has failed. (IP conversion error)
707 Connect Failed	Connection with the server or the broadcast has failed.
723 Analyze Error	The received protocol data cannot be analyzed.
727 System Error(Memory)	A system error occurred in the unit. (memory shortage, internal cURL processing error)
728 Response Timeout	A response timeout occurred to unit's connection request.
743 System Error(Program)	A system error occurred in the unit. (program error, internal cURL processing error)
745 System Error(LAN Port)	A system error occurred in the unit. (LAN unusable, internal cURL processing error)
752 Response Timeout	A response timeout occurred to unit's connection request.
755 Disconnect Error(Send)	Because the connection between this unit and the server or the broadcast was disconnected, it has failed to send the protocol data.
756 Disconnect Error(Receive)	Because the connection between this unit and the server or the broadcast was disconnected, it has failed to receive the protocol data.
761 Analyze Error	The received protocol data cannot be analyzed.
790 List Not Found	The list information which was sent from the server is invalid or not found.
791 Stream Timeout	The stream data is not sent from the broadcast.

* Server: vTuner broadcast list server

* Broadcast: Server of internet radio broadcast

BLOCK DIAGRAM

OVERALL BLOCK Diagram



AV CBA
USB401 USB
JK405 VIDEO
JK403B COAX
JK403A OPT
CN402B AUX2
CN402A AUX1
JK401 IPOD
IC401 AMP
IC303, IC304 Multi Plexer
TU401 FM Tuner
IC402 AMP
IC301 VIDEO Driver
IC405 Buffer AMP
IC306, IC307 Single SW×2
SW
IC404 AMP
CN403 30pin
CN405 4pin
CN404 30pin
CN402 2pin(3pin)
Shielded Cable
BD MAIN CBA
JK7501 HDMI 19pin
74HCU04
CN7101 30pin
IC7501 HDMI Transmitter
IC7301 Video Decoder
IC7201 Audio ADC
CN7001 27pin
IC6601, 2 DDR2 SDRAM (Nom:512Mbit X 2) (FullHD,OSD:1Gbit X 2)
IC6501, 2 DDR2 SDRAM (1Gbit X 2)
IC6901 NAND FLASH (Nom:512Mbit,) (w/NetUpdate,Failsafe:1Gbit) (w/Netflix:2Gbit)
IC6002 8kBit EEPROM
IC6001 BP1A
LAN JK6104
IC6401 LAN Transceiver
IC6702 Clock Generator
IC6701 USB HiSideSW
USB CN7601
(NO CONNECTION)
CN7902 50pin
CN7901 40pin
CN501 5pin
CN804 6pin
CN7903 4pin
CN801,2,3 10pin
IC301 SPM Driver
IC302 Motor Driver
Inductor
8V Reg.
CN302 19pin
CN101 45pin
CN301 4pin
CN6101 30pin
BD Loader unit
BD OPU
Spindle
Pick Up
CN202 30pin
JK201 16pin
JK5001 Speaker OUT X 6ch
FAN
FAN Fast/Slow
AMP Power Over Detect
IC501 D-AMP
IC5001 D-AMP
IC5002 D-AMP
IC5005A Comparator
IC5004 PWM Processer
IC204 Buffer AMP
IC5003 Audio DSP
IC5006 EEPROM
XL5001 Xtal
CN201 CN27pin
IC203 μCOM
CEC
IC202 IPOD Certification
XL201 8MHz
CN204 5pin (NO CONNECTION)
CN205 7pin (NO CONNECTION)
IC201 EEPROM
SAFETY
CN9001 30pin
AMP/uCOM Block
CN203 25pin
AMP/PSU CBA
PSU Block
(TO AC CORD)
CN9000 2pin
Fuse
EMI Filter
BD9000 Bridge
PWM IC1
AMP Driver
T9000 Trans
T9001 Trans
T9002 Trans
PC
PWM IC2
Gene.
Filter
Inductor
SW
Safety
Reg. Safety
Reg.
IC205 LDO
HP Block
HP DAC
MUTE
AMP
CN9002 11pin
CN501 4pin (NO CONNECTION)
POWER SW CBA
SW3007 SW
D3001 LED
Solder Directly
CN3002 3pin
Q3001 LED On/Off
SW3001-6 SW X 6
RS3001 IR
CN804 25pin
IC3001 VFD
IC3002 VFD Driver
FRONT CBA
CN807 12pin
SD801 SD Slot
SD CARD CBA
CN405 3pin
JK405 Pin Jack
MP3 CBA

SCHEMATIC DIAGRAMS AND CBA

Standard Notes

WARNING

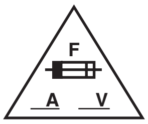
Many electrical and mechanical parts in this chassis have special characteristics. These characteristics often pass unnoticed and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts that have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by the mark "⚠" in the schematic diagram and the parts list. Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts that do not have the same safety characteristics as specified in the parts list may create shock, fire, or other hazards.

Notes:

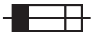
1. Do not use the part number shown on these drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since these drawings were prepared.
2. All resistance values are indicated in ohms ($K = 10^3$, $M = 10^6$).
3. Resistor wattages are 1/4W or 1/6W unless otherwise specified.
4. All capacitance values are indicated in µF ($P = 10^{-6}$ µF).
5. All voltages are DC voltages unless otherwise specified.
6. Electrical parts such as capacitors, connectors, diodes, IC's, transistors, resistors, switches, and fuses are identified by four digits. The first two digits are not shown for each component. In each block of the diagram, there is a note such as shown below to indicate these abbreviated two digits.

LIST OF CAUTION, NOTES, AND SYMBOLS USED IN THE SCHEMATIC DIAGRAMS ON THE FOLLOWING PAGES:

1. CAUTION:



FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE FUSE.
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQES D'INCELE N'UTILISER QUE DES FUSIBLE DE MÊME TYPE.
RISK OF FIRE-REPLACE FUSE AS MARKED.



This symbol means fast operating fuse.
Ce symbole reprèsente un fusible à fusion rapide.

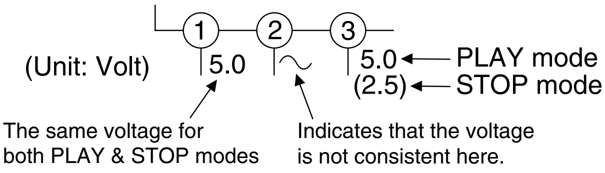
2. CAUTION:

Fixed Voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F9000) is blown, first check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.

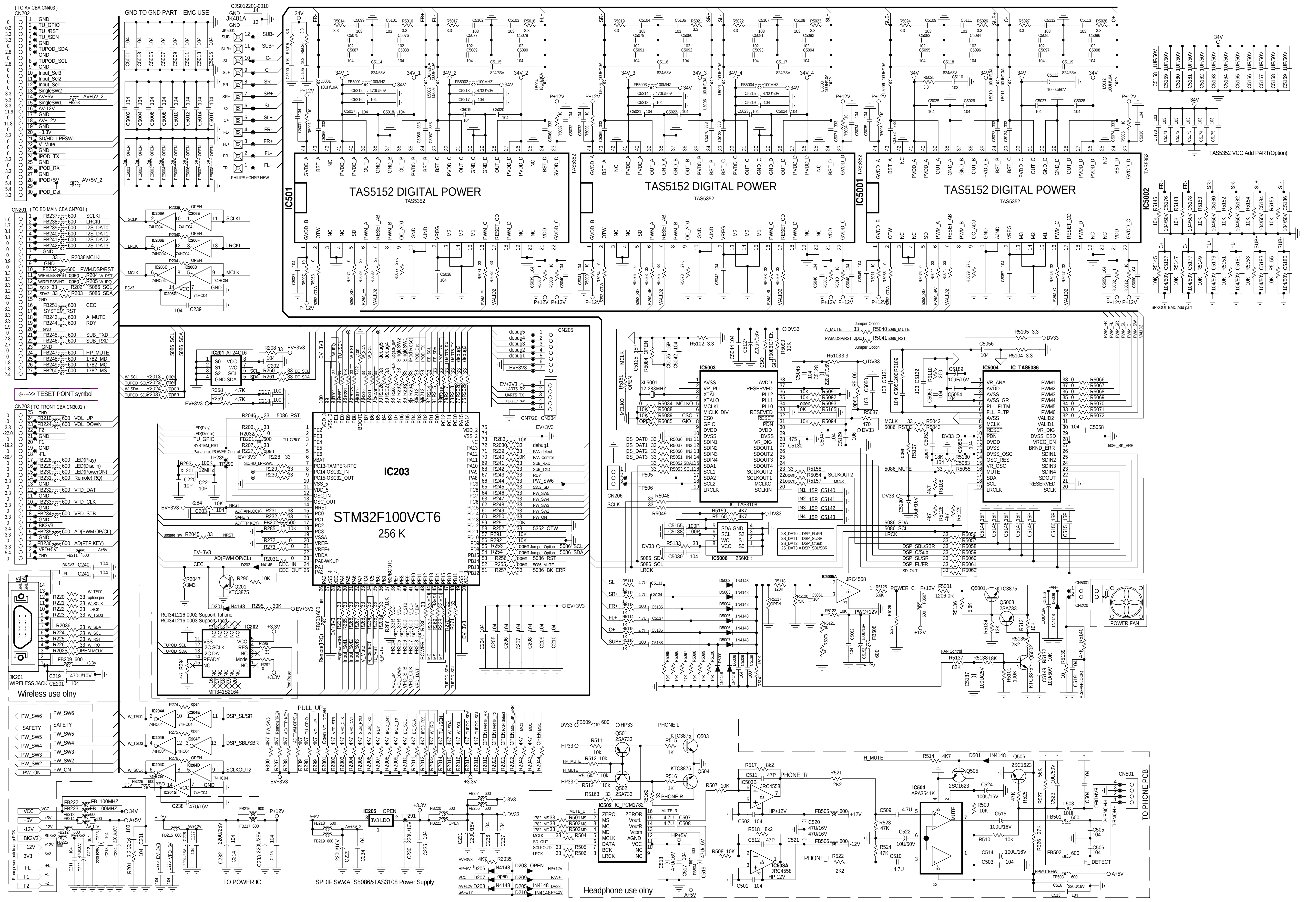
3. Note:

1. Do not use the part number shown on the drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since the drawings were prepared.
2. To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list section of the service manual.

4. Voltage indications for PLAY and STOP mode on the schematics are as shown below:


(Unit: Volt)
1
2
3
5.0
~
5.0
(2.5)
PLAY mode
STOP mode
The same voltage for both PLAY & STOP modes
Indicates that the voltage is not consistent here.

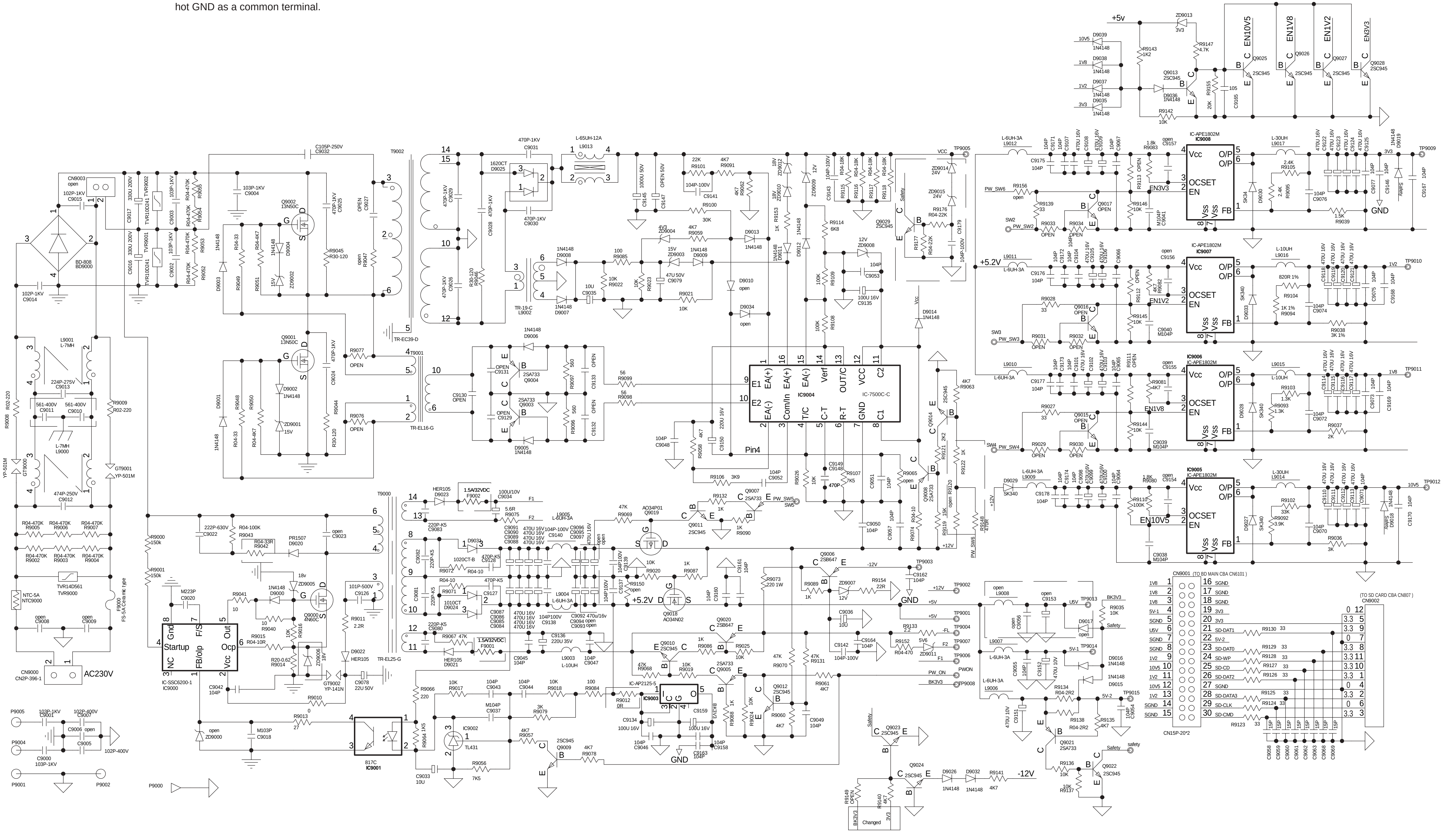
AMP/PSU 1 Schematic Diagram


(TO AV CBA CN403)
CN202
CJS012201-0010
JK401A
PHILIPS 6CHSP NEW
GND TO GND PART
EMC USE
CN201 (TO BD MAIN CBA CN7001)
CN203 (TO FRONT CBA CN3001)
TESET POINT symbol
TAS5152 DIGITAL POWER
TAS5352
IC501
IC5001
IC5002
TAS5352 VCC Add PART(Option)
SPKOUT EMC Add part
IC201 AT24C16
IC203
STM32F100VCT6
256 K
IC202
MFI341S2164
RCI341216-0002 Support Iphone
RCI341216-0003 Support Ipod
JK201
WIRELESS JACK
Wireless use olny
CN205
CN7/20
CN204
CN206
IC5003
IC_TAS3108
IC5004
IC_TAS5086
IC5006
256Kbit
XL5001
12.288MHZ
IC5005A
JRC4558
KTC3875
2SA733
POWER FAN
CN5001
PULL_UP
IC205
3V3 LDO
TO POWER IC
SPDIF SW&ATS5086&TAS3108 Power Supply
IC502
IC_PCM1782
Headphone use olny
IC503B
IC503A
JRC4558
IC504
APA3541K
CN501
TO PHONE PCB
From power pcb to amp PCB
PHONE_R
PHONE_L
H_MUTE
H_DETECT

AMP/PSU 2 Schematic Diagram

CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F9000) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.

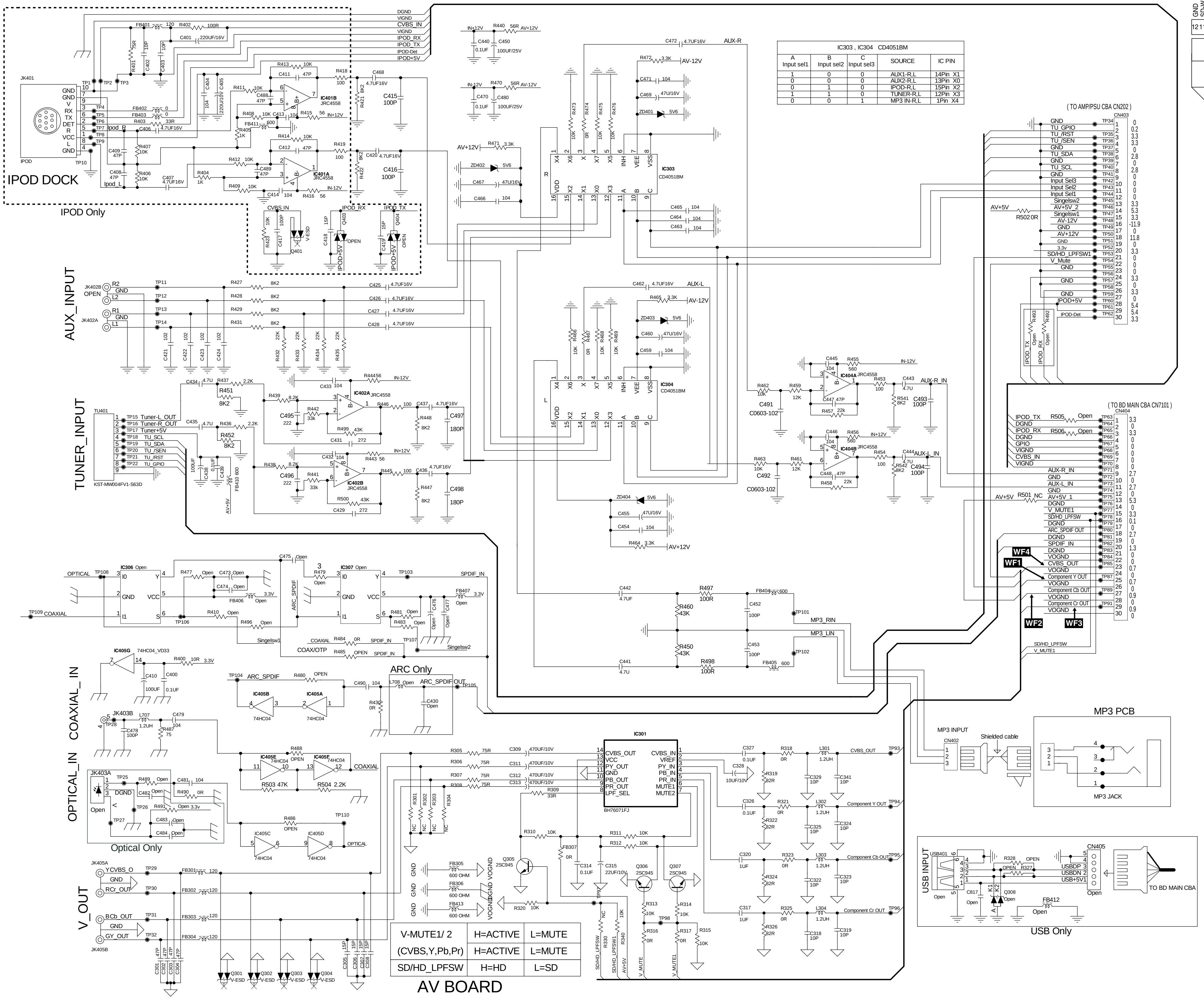
NOTE:
The voltage for parts in hot circuit is measured using hot GND as a common terminal.



AC230V
CN9000
CN2P-396-1
BD-808
BD9000
L9001
L-7MH
L9000
F9000
FS-5A Ceramic type
NTC-5A
NTC9000
TVR14D561
TVR9000
GT9000
YP-501M
GT9001
CN9003
open
Q9001
13N50C
Q9002
13N50C
Q9000
4N60C
IC-SSC6200-1
IC9000
Startup
FB/Olp
NC
Gnd
F/S
Out
Ocp
Vcc
817C
IC9001
IC9002
TL431
T9002
TR-EC39-D
T9001
TR-EL16-G
T9000
TR-EL25-G
TR-19-C
L9002
L-65UH-12A
L9013
IC9004
IC-7500C-C
E1
E2
EA(+)
EA(-)
Com/In
Verf
T/C
C-T
R-T
OUT/C
VCC
GND
C1
C2
Pin4
Q9004
2SA733
Q9003
2SA733
Q9018
AO34N02
Q9019
AO34P01
IC9003
IC-AP2125-5
IC9008
IC9007
IC9006
IC9005
IC-APE1802M
Vcc
O/P
OCSET
EN
Vss
FB
EN10V5
EN1V8
EN1V2
EN3V3
Q9025
Q9026
Q9027
Q9028
2SC945
+5v
+5.2V
+12V
-12V
GND
Safety
safety
CN9001 (TO BD MAIN CBA CN6101)
CN15P-20*2
(TO SD CARD CBA CN807)
CN9002
SD-DAT1
SD-DAT0
SD-WP
SD-CD
SD-DAT2
SD-DAT3
SD-CLK
SD-CMD
SGND
3V3
5V-2
PW_ON
PWON
BK3V3
Changed
TP9001
TP9002
TP9003
TP9004
TP9005
TP9006
TP9007
TP9008
TP9009
TP9010
TP9011
TP9012
TP9013
TP9014
TP9015
P9000
P9001
P9002
P9004
P9005

AV & MP3 Schematic Diagram

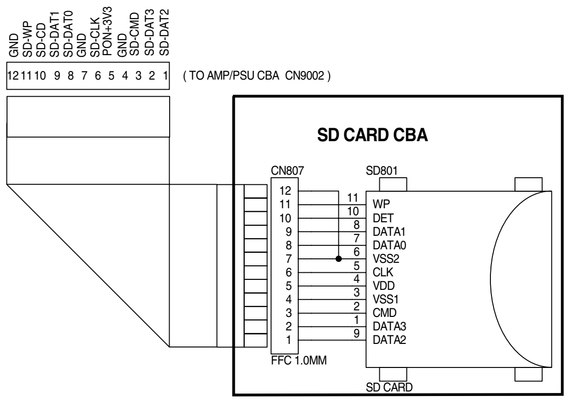
SD Card Schematic Diagram


IPOD DOCK
IPOD Only
JK401
IPOD
GND
GND
V
RX
TX
DET
R
VCC
L
GND
DGND
VIGND
CVBS_IN
VIGND
IPOD_RX
IPOD_TX
IPOD-Det
IPOD+5V
IC401A
IC401B
JRC4558
IC303
CD4051BM
IC304
CD4051BM
AUX-R
AUX-L
AV-12V
AV+12V
IN+12V
IN-12V
AUX_INPUT
JK402B
JK402A
R2
GND
L2
R1
GND
L1
OPEN
TUNER_INPUT
TU401
KST-MW004FV1-S63D
Tuner-L_OUT
Tuner-R_OUT
Tuner+5V
TU_SCL
TU_SDA
TU_SEN
TU_RST
TU_GPIO
IC402A
IC402B
IC404A
IC404B
AUX-R_IN
AUX-L_IN
(TO AMP/PSU CBA CN202)
CN403
(TO BD MAIN CBA CN7101)
CN404
OPTICAL
COAXIAL
IC306
IC307
SPDIF_IN
Singlelsw1
Singlelsw2
COAX/OTP
ARC_SPDIF
ARC Only
ARC_SPDIF OUT
MP3_RIN
MP3_LIN
COAXIAL_IN
JK403B
OPTICAL_IN
JK403A
Optical Only
IC405A
IC405B
IC405C
IC405D
IC405E
IC405F
IC405G
74HC04
IC301
BH76071FJ
CVBS_OUT
VCC
PY_OUT
GND
PB_OUT
PR_OUT
LPF_SEL
CVBS_IN
VREF
PY_IN
PB_IN
PR_IN
MUTE1
MUTE2
Component Y OUT
Component Cb OUT
Component Cr OUT
V_OUT
JK405A
JK405B
Y.CVBS_O
RCr_OUT
BCb_OUT
GY_OUT
Q301
Q302
Q303
Q304
V-ESD
Q305
Q306
Q307
2SC945
V_MUTE
V_MUTE1
SD/HD_LPFSW
WF1
WF2
WF3
WF4
MP3 PCB
MP3 INPUT
CN402
Shielded cable
MP3 JACK
USB INPUT
USB401
CN405
USBDP
USBDN
USB+5V1
TO BD MAIN CBA
USB Only
AV BOARD
GND
SD-WP
SD-CD
SD-DAT1
SD-DAT0
SD-CLK
PON+3V3
SD-CMD
SD-DAT3
SD-DAT2
(TO AMP/PSU CBA CN9002)
SD CARD CBA
CN807
SD801
WP
DET
DATA1
DATA0
VSS2
CLK
VDD
VSS1
CMD
DATA3
DATA2
FFC 1.0MM
SD CARD

IC303 , IC304 CD4051BM				
A Input sel1	B Input sel2	C Input sel3	SOURCE	IC PIN
1	0	0	AUX1-R,L	14Pin X1
0	0	0	AUX2-R,L	13Pin X0
0	1	0	IPOD-R,L	15Pin X2
1	1	0	TUNER-R,L	12Pin X3
0	0	1	MP3 IN-R,L	1Pin X4

V-MUTE1/ 2	H=ACTIVE	L=MUTE
(CVBS,Y,Pb,Pr)	H=ACTIVE	L=MUTE
SD/HD_LPFSW	H=HD	L=SD

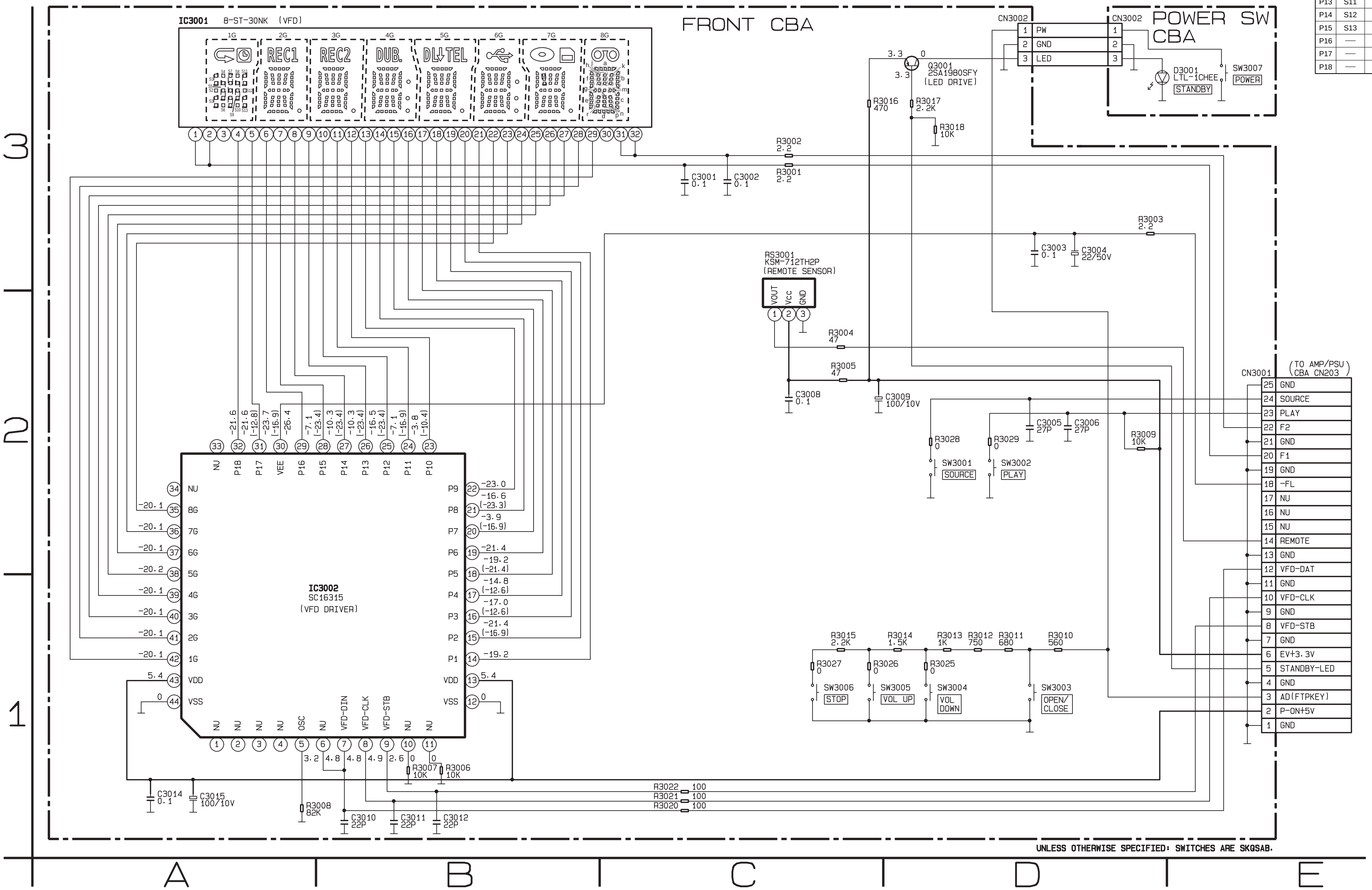
AV BOARD



Front & Power SW Schematic Diagram

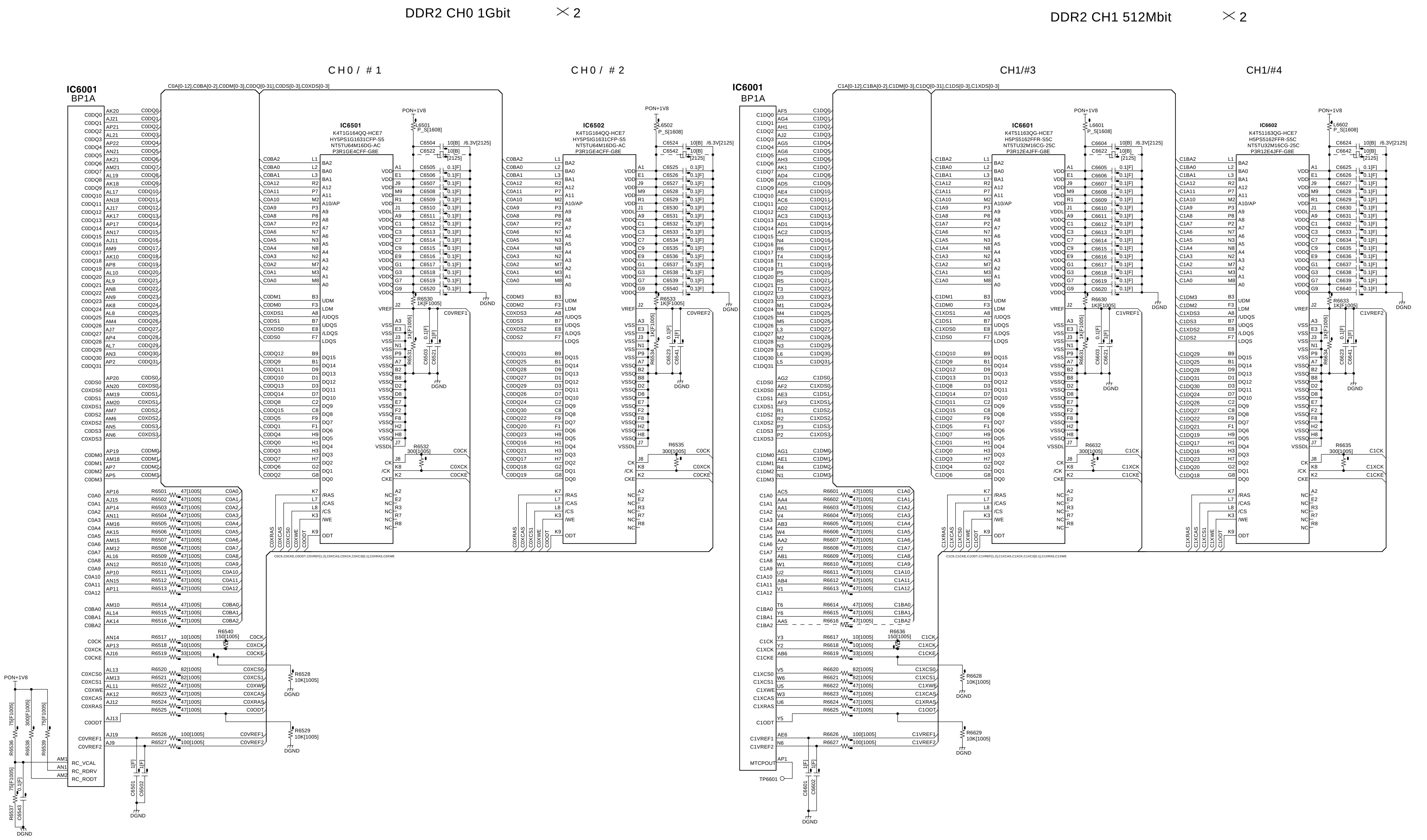
FL5001 MATRIX CHART

	1G	2G	3G	4G	5G	6G	7G	8G
P1	↪	REC	REC2	DUB.	DL↓	⇾	◎	ꝏ
P2	🕒	1	—	:	TEL	:	▭	—
P3	S1	a	a	a	a	a	a	a
P4	S2	f	f	f	f	f	f	f
P5	S3	h	h	h	h	h	h	h
P6	S4	j	j	j	j	j	j	j
P7	S5	k	k	k	k	k	k	k
P8	S6	b	b	b	b	b	b	b
P9	S7	g	g	g	g	g	g	g
P10	S8	s	s	s	s	s	s	s
P11	S9	m	m	m	m	m	m	m
P12	S10	e	e	e	e	e	e	e
P13	S11	r	r	r	r	r	r	r
P14	S12	p	p	p	p	p	p	p
P15	S13	n	n	n	n	n	n	n
P16	—	c	c	c	c	c	c	c
P17	—	d	d	d	d	d	d	d
P18	—	∘	∘	∘	∘	∘	∘	—

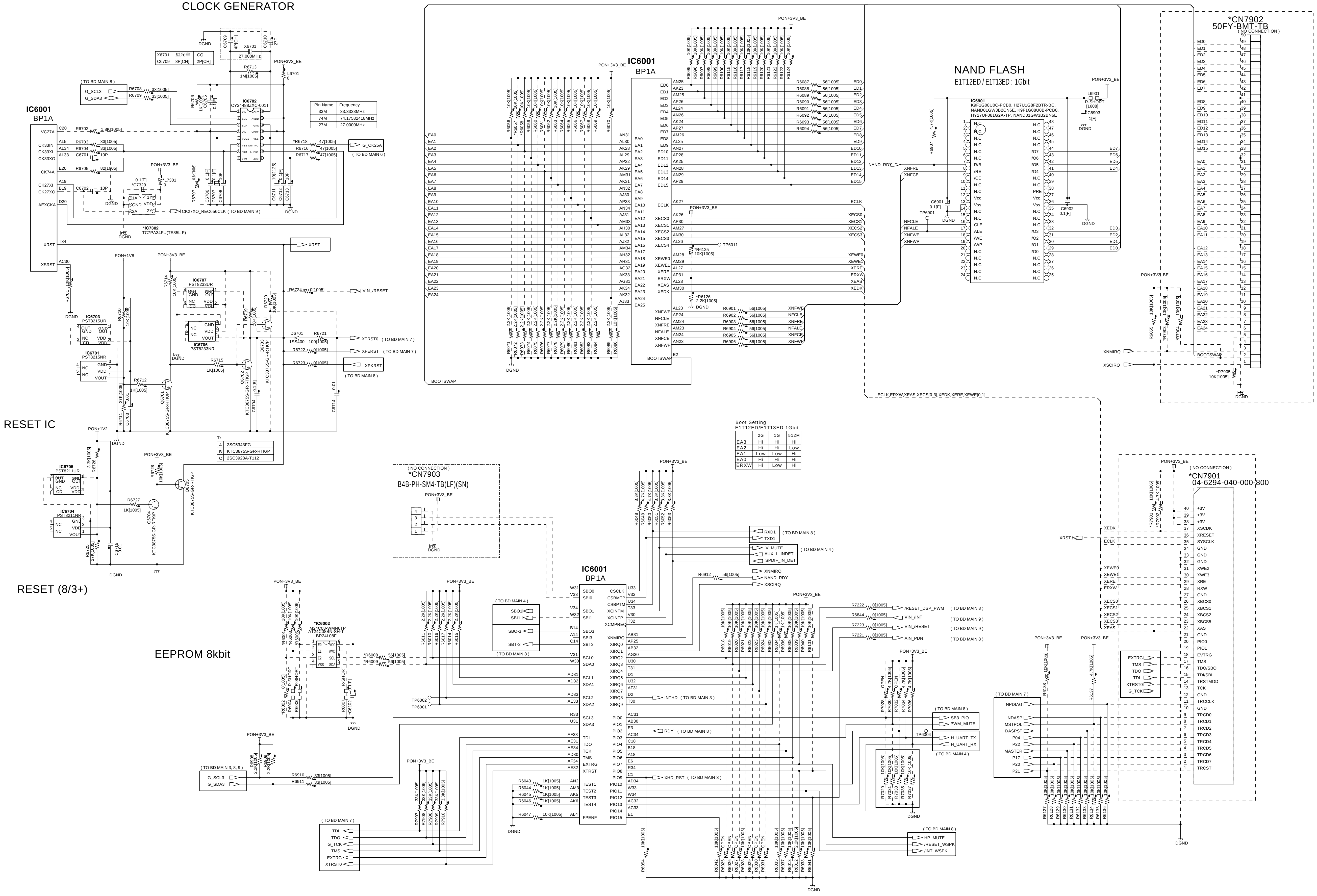

FRONT CBA
POWER SW CBA
IC3001 8-ST-30NK (VFD)
1G 2G 3G 4G 5G 6G 7G 8G
REC1 REC2 DUB. DL↓TEL
IC3002 SC16315 (VFD DRIVER)
NU P18 P17 VEE P16 P15 P14 P13 P12 P11 P10
P9 P8 P7 P6 P5 P4 P3 P2 P1 VDD VSS
NU 8G 7G 6G 5G 4G 3G 2G 1G VDD VSS
NU NU NU NU OSC NU VFD-DIN VFD-CLK VFD-STB NU NU
-21.6 -21.6 (-12.8) -23.7 (-16.9) -26.4 -7.1 (-23.4) -10.3 (-23.4) -10.3 (-23.4) -16.5 (-23.4) -7.1 (-16.9) -3.8 (-10.4)
-23.0 -16.6 (-23.3) -3.9 (-16.9) -21.4 -19.2 (-21.4) -14.8 (-12.6) -17.0 (-12.6) -21.4 (-16.9) -19.2
-20.1 -20.1 -20.1 -20.2 -20.1 -20.1 -20.1 -20.1 5.4 0
3.2 4.8 4.8 4.9 2.6 0 0
C3001 0.1 C3002 0.1
R3001 2.2 R3002 2.2 R3003 2.2
C3003 0.1 C3004 22/50V
RS3001 KSM-712TH2P (REMOTE SENSOR)
VOUT Vcc GND
R3004 47 R3005 47
C3008 0.1 C3009 100/10V
Q3001 2SA1980SFY (LED DRIVE)
3.3 0 3.3
R3016 470 R3017 2.2K R3018 10K
CN3002 PW GND LED
D3001 LTL-1CHEE STANDBY
SW3007 POWER
C3005 27P C3006 27P
R3028 0 R3029 0 R3009 10K
SW3001 SOURCE SW3002 PLAY
R3015 2.2K R3014 1.5K R3013 1K R3012 750 R3011 680 R3010 560
R3027 0 R3026 0 R3025 0
SW3006 STOP SW3005 VOL UP SW3004 VOL DOWN SW3003 OPEN/CLOSE
CN3001 (TO AMP/PSU CBA CN203)
25 GND 24 SOURCE 23 PLAY 22 F2 21 GND 20 F1 19 GND 18 -FL 17 NU 16 NU 15 NU 14 REMOTE 13 GND 12 VFD-DAT 11 GND 10 VFD-CLK 9 GND 8 VFD-STB 7 GND 6 EV+3.3V 5 STANDBY-LED 4 GND 3 AD(FTPKEY) 2 P-ON+5V 1 GND
C3014 0.1 C3015 100/10V R3008 82K
C3010 22P C3011 22P C3012 22P
R3007 10K R3006 10K
R3022 100 R3021 100 R3020 100
A B C D E
1 2 3

UNLESS OTHERWISE SPECIFIED: SWITCHES ARE SKQSAB.

BD Main 1 Schematic Diagram


DDR2 CH0 1Gbit ×2
DDR2 CH1 512Mbit ×2
CH0/#1
CH0/#2
CH1/#3
CH1/#4
IC6001
BP1A
C0A[0-12],C0BA[0-2],C0DM[0-3],C0DQ[0-31],C0DS[0-3],C0XDS[0-3]
C1A[0-12],C1BA[0-2],C1DM[0-3],C1DQ[0-31],C1DS[0-3],C1XDS[0-3]
IC6501
K4T1G164QQ-HCE7
HY5PS1G1631CFP-S5
NT5TU64M16DG-AC
P3R1GE4CFF-G8E
IC6502
K4T1G164QQ-HCE7
HY5PSIG1631CFP-S5
NT5TU64M16DG-AC
P3R1GE4CFF-G8E
IC6601
K4T51163QG-HCE7
H5PS5162FFR-S5C
NT5TU32M16CG-25C
P3R12E4JFF-G8E
IC6602
K4T51163QG-HCE7
H5PS5162FFR-S5C
NT5TU32M16CG-25C
P3R12E4JFF-G8E
PON+1V8
DGND
C0VREF1
C0VREF2
C1VREF1
C1VREF2
RC_VCAL
RC_RDRV
RC_RODT
MTCPOUT
TP6601

BD Main 2 Schematic Diagram



CLOCK GENERATOR
RESET IC
RESET (8/3+)
EEPROM 8kbit
NAND FLASH
E1T12ED / E1T13ED : 1Gbit
IC6001
BP1A
IC6702
CY24488ZXC-001T
IC6901
K9F1G08U0C-PCB0, H27U1G8F2BTR-BC,
NAND01GW3B2CN6E, K9F1G08U0B-PCB0,
HY27UF081G2A-TP, NAND01GW3B2BN6E
IC6703 PST8215UR
IC6701 PST8215NR
IC6707 PST8233UR
IC6706 PST8233NR
IC6705 PST8211UR
IC6704 PST8211NR
*IC7302 TC7PA34FU(TE85L F)
*IC6002 M24C08-WMN6TP AT24C08BN-SH-T BR24L08F
X6701 27.000MHz
*CN7902 50FY-BMT-TB (NO CONNECTION)
*CN7901 04-6294-040-000-800 (NO CONNECTION)
*CN7903 B4B-PH-SM4-TB(LF)(SN) (NO CONNECTION)
PON+3V3_BE
PON+1V8
PON+1V2
DGND
G_CK25A (TO BD MAIN 6)
(TO BD MAIN 8)
(TO BD MAIN 7)
(TO BD MAIN 4)
(TO BD MAIN 3)
(TO BD MAIN 9)
(TO BD MAIN 3, 8, 9)
XRST
VIN_/RESET
XTRST0
XFERST
XPKRST
CK27XO_REC656CLK (TO BD MAIN 9)
RXD1
TXD1
V_MUTE
AUX_L_INDET
SPDIF_IN_DET
XNMIRQ
NAND_RDY
XSCIRQ
/RESET_DSP_PWM
VIN_/INT
VIN_/RESET
AIN_PDN
SB3_PIO
PWM_MUTE
H_UART_TX
H_UART_RX
HP_MUTE
/RESET_WSPK
/INT_WSPK
INTHD (TO BD MAIN 3)
RDY (TO BD MAIN 8)
XHD_RST (TO BD MAIN 3)
BOOTSWAP
ECLK,ERXW,XEAS,XECS[0-3],XEDK,XERE,XEWE[0,1]
NAND_RDY
TP6001
TP6002
TP6004
TP6011
TP6901

X6701	星光華	CQ
C6709	8P[CH]	2P[CH]

Pin Name	Frequency
33M	33.3333MHz
74M	74.17582418MHz
27M	27.0000MHz

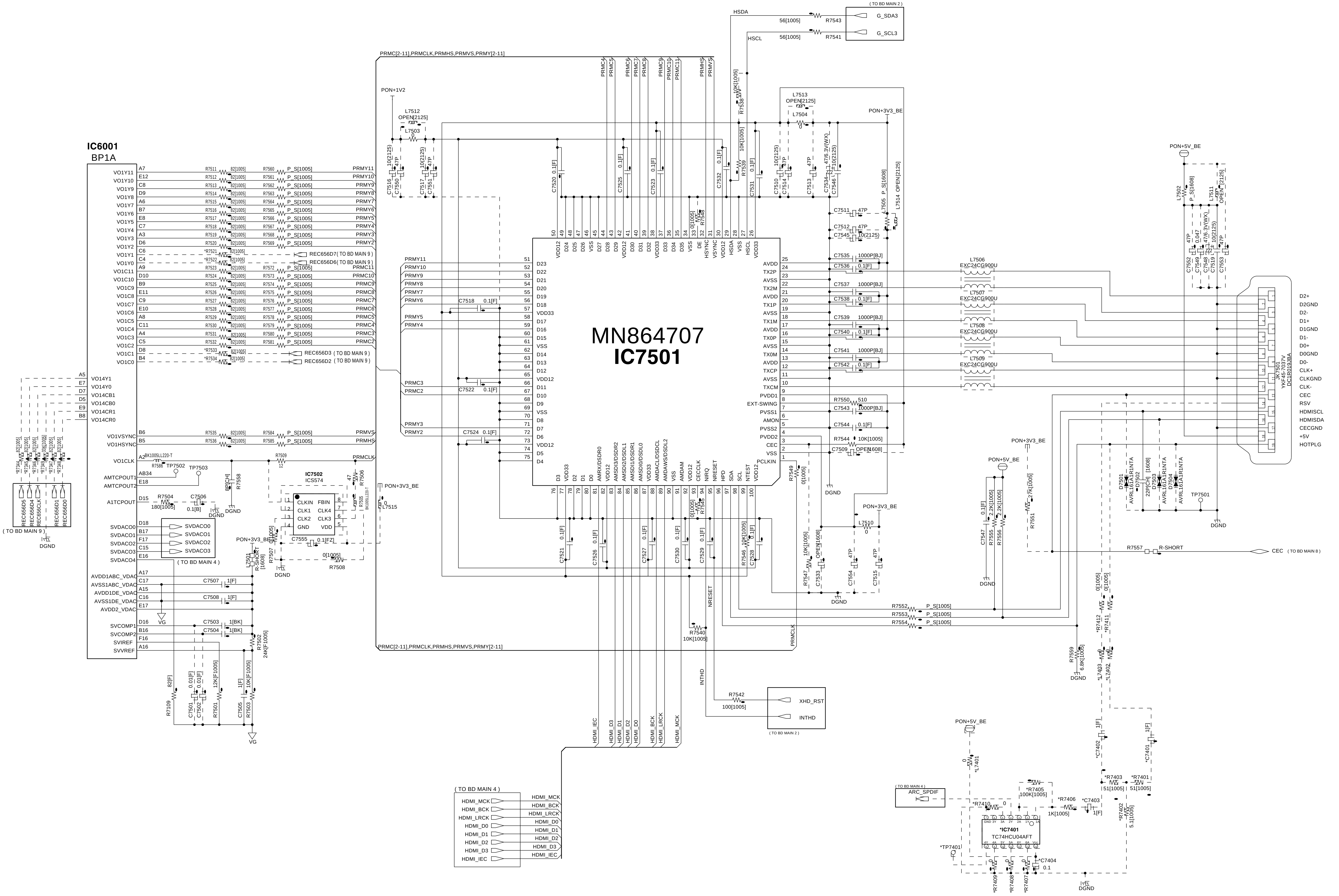
Tr

A	2SC5343FG
B	KTC3875S-GR-RTK/P
C	2SC3928A-T112

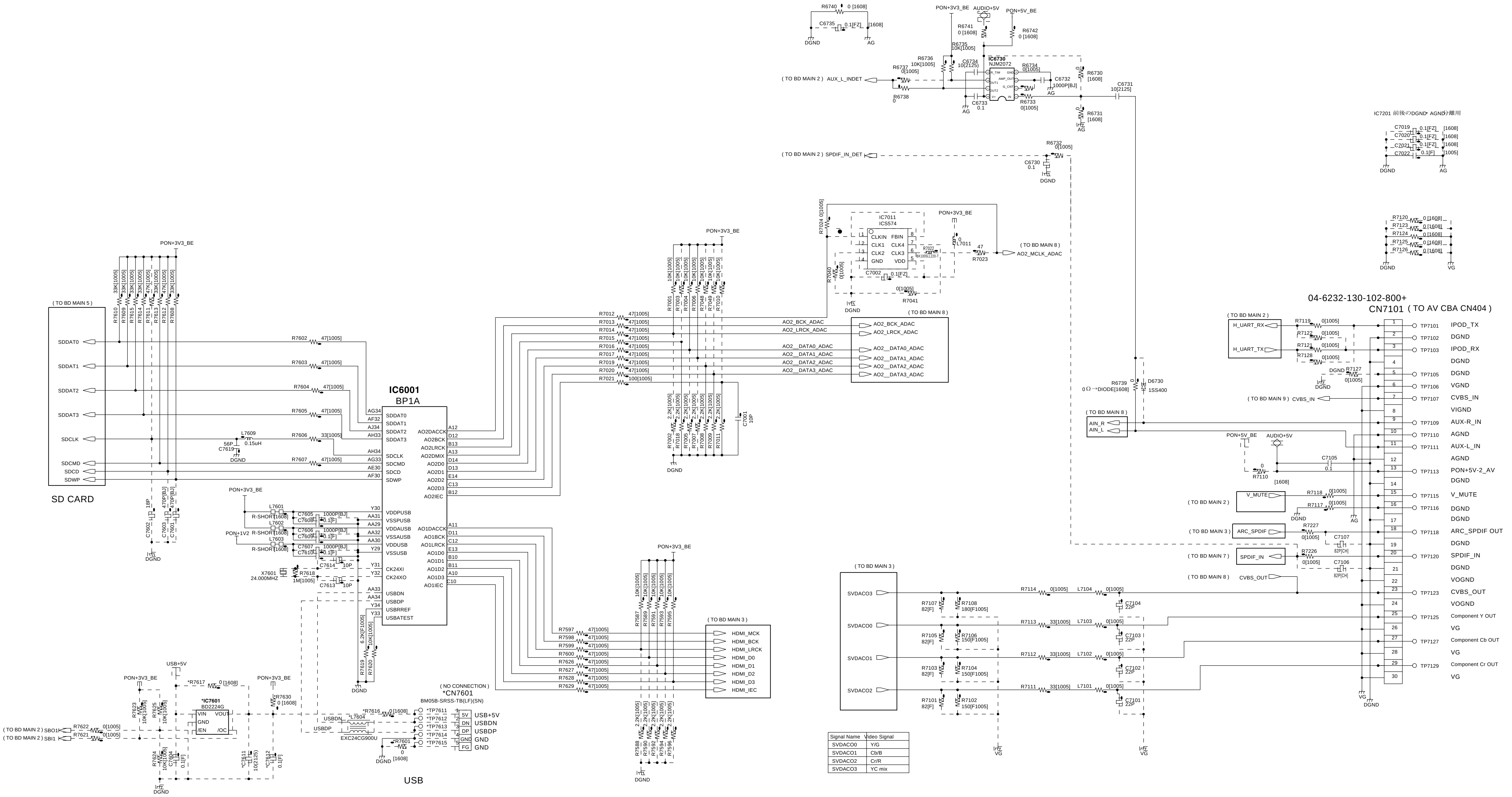
Boot Setting
E1T12ED/E1T13ED:1Gbit

	2G	1G	512M
EA3	Hi	Hi	Hi
EA2	Hi	Hi	Low
EA1	Low	Low	Hi
EA0	Hi	Hi	Hi
ERXW	Hi	Low	Hi

BD Main 3 Schematic Diagram


IC6001
BP1A
MN864707
IC7501
IC7502
ICS574
*IC7401
TC74HCU04AFT
PRMC[2-11],PRMCLK,PRMHS,PRMVS,PRMY[2-11]
PON+1V2
PON+3V3_BE
PON+5V_BE
(TO BD MAIN 2)
G_SDA3
G_SCL3
HSDA
HSCL
(TO BD MAIN 4)
(TO BD MAIN 8)
(TO BD MAIN 9)
HDMI_MCK
HDMI_BCK
HDMI_LRCK
HDMI_D0
HDMI_D1
HDMI_D2
HDMI_D3
HDMI_IEC
XHD_RST
INTHD
NRESET
PRMCLK
ARC_SPDIF
CEC
R-SHORT
JK7501
YKF45-7037V
DC1R019JBA
D2+
D2GND
D2-
D1+
D1GND
D1-
D0+
D0GND
D0-
CLK+
CLKGND
CLK-
CEC
RSV
HDMISCL
HDMISDA
CECGND
+5V
HOTPLG
L7506
EXC24CG900U
L7507
EXC24CG900U
L7508
EXC24CG900U
L7509
EXC24CG900U
SVDAC00
SVDAC01
SVDAC02
SVDAC03
VG
DGND
TP7501
TP7502
TP7503
*TP7401

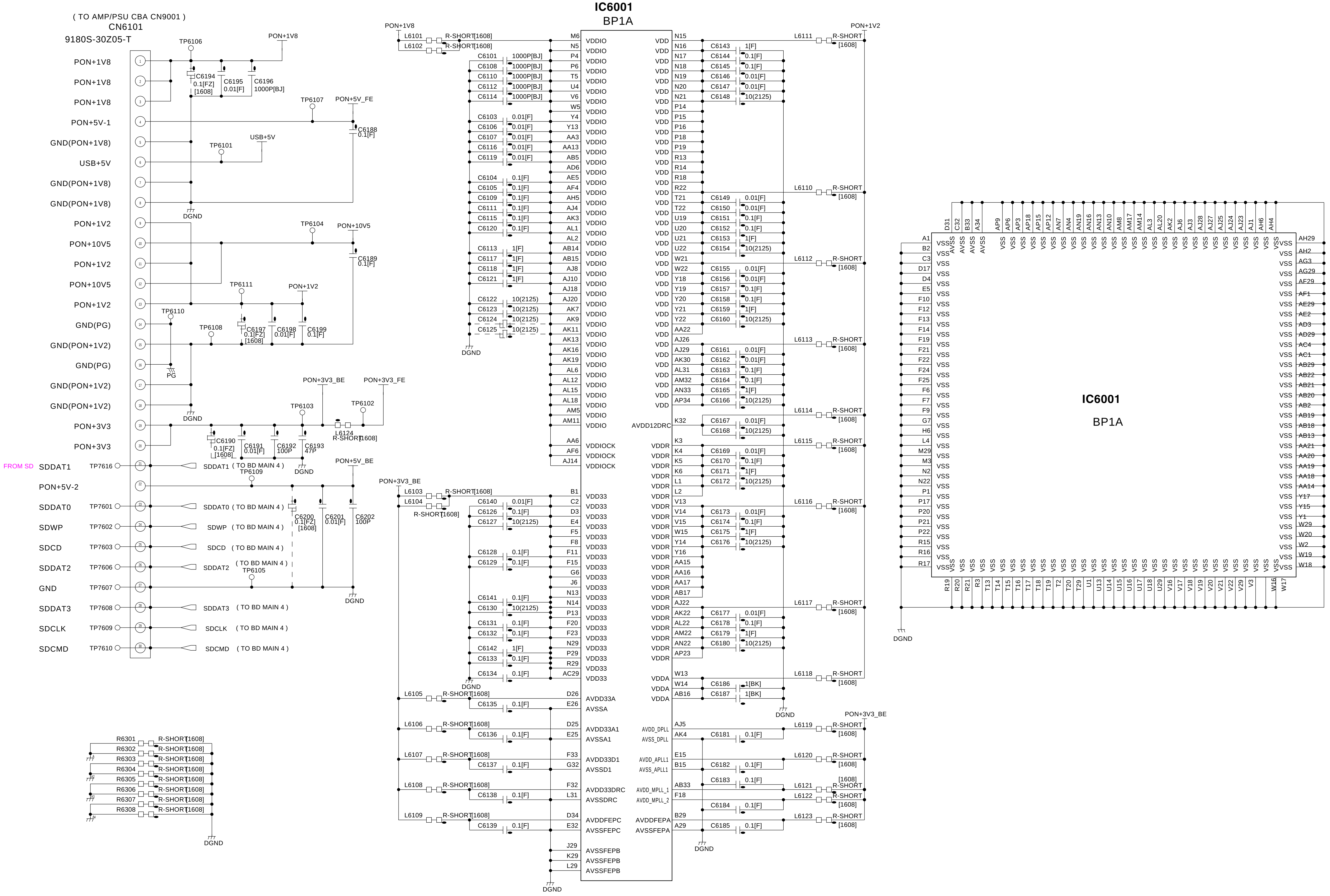
BD Main 4 Schematic Diagram



IC6001
BP1A
SD CARD
(TO BD MAIN 5)
SDDAT0
SDDAT1
SDDAT2
SDDAT3
SDCLK
SDCMD
SDCD
SDWP
PON+3V3_BE
PON+1V2
USB+5V
DGND
AG
VG
AUDIO+5V
PON+5V_BE
IC6730
NJM2072
IC7011
ICS574
(TO BD MAIN 2) AUX_L_INDET
(TO BD MAIN 2) SPDIF_IN_DET
(TO BD MAIN 8) AO2_MCLK_ADAC
(TO BD MAIN 8)
AO2_BCK_ADAC
AO2_LRCK_ADAC
AO2__DATA0_ADAC
AO2__DATA1_ADAC
AO2__DATA2_ADAC
AO2__DATA3_ADAC
(TO BD MAIN 3)
HDMI_MCK
HDMI_BCK
HDMI_LRCK
HDMI_D0
HDMI_D1
HDMI_D2
HDMI_D3
HDMI_IEC
SVDACO3
SVDACO0
SVDACO1
SVDACO2
X7601
24.000MHZ
*IC7601
BD2224G
(TO BD MAIN 2) SBO1
(TO BD MAIN 2) SBI1
(NO CONNECTION)
*CN7601
BM05B-SRSS-TB(LF)(SN)
USB+5V
USBDN
USBDP
GND
GND
EXC24CG900U
USB
IC7201 前後のDGND・AGND分離用
04-6232-130-102-800+
CN7101 (TO AV CBA CN404)
(TO BD MAIN 2) H_UART_RX
H_UART_TX
(TO BD MAIN 9) CVBS_IN
(TO BD MAIN 8) AIN_R AIN_L
(TO BD MAIN 2) V_MUTE
(TO BD MAIN 3) ARC_SPDIF
(TO BD MAIN 7) SPDIF_IN
(TO BD MAIN 8) CVBS_OUT
IPOD_TX
DGND
IPOD_RX
DGND
DGND
VGND
CVBS_IN
VIGND
AUX-R_IN
AGND
AUX-L_IN
AGND
PON+5V-2_AV
DGND
V_MUTE
DGND
DGND
ARC_SPDIF OUT
DGND
SPDIF_IN
DGND
VOGND
CVBS_OUT
VOGND
Component Y OUT
VG
Component Cb OUT
VG
Component Cr OUT
VG

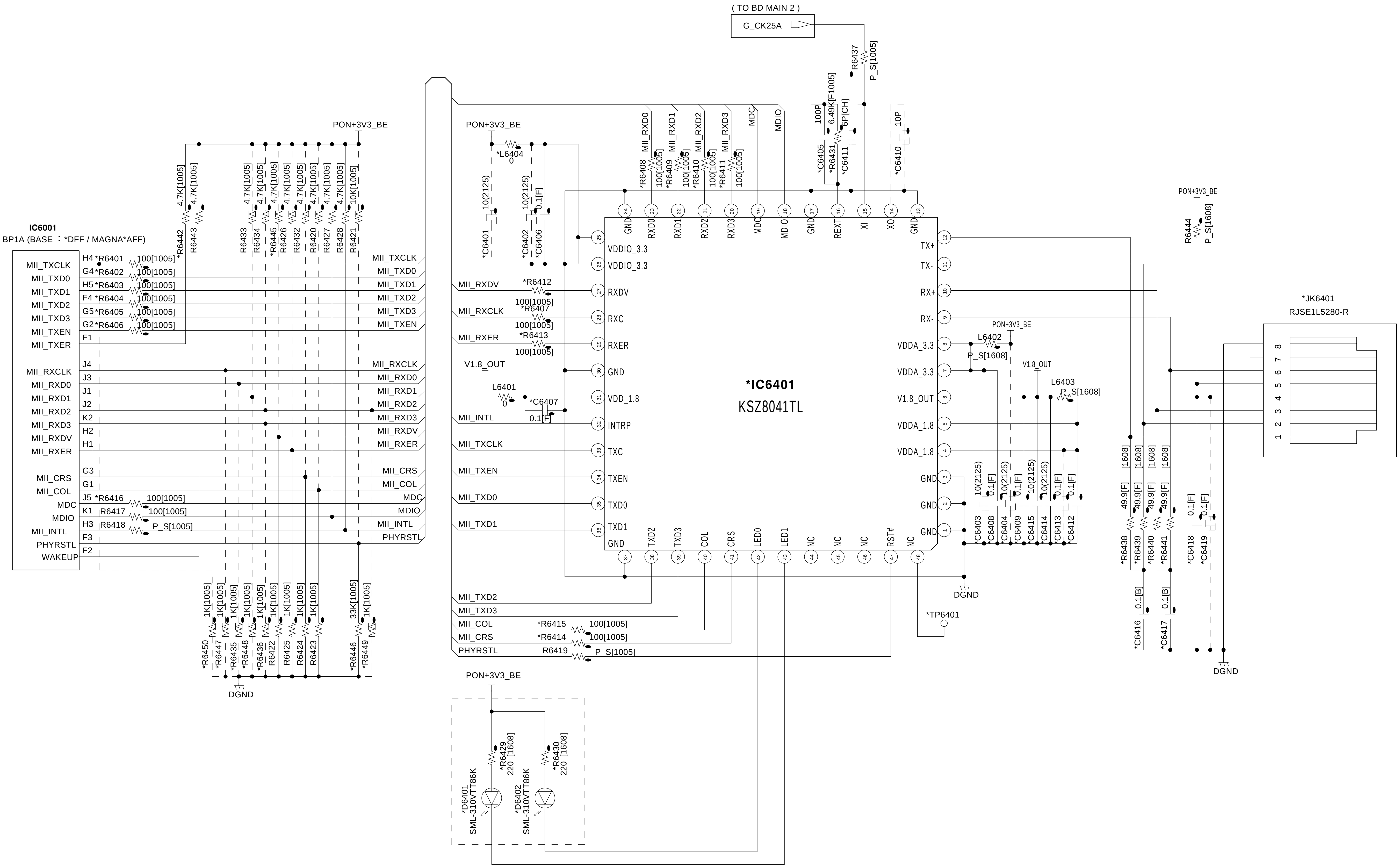
Signal Name	Video Signal
SVDACO0	Y/G
SVDACO1	Cb/B
SVDACO2	Cr/R
SVDACO3	YC mix

BD Main 5 Schematic Diagram



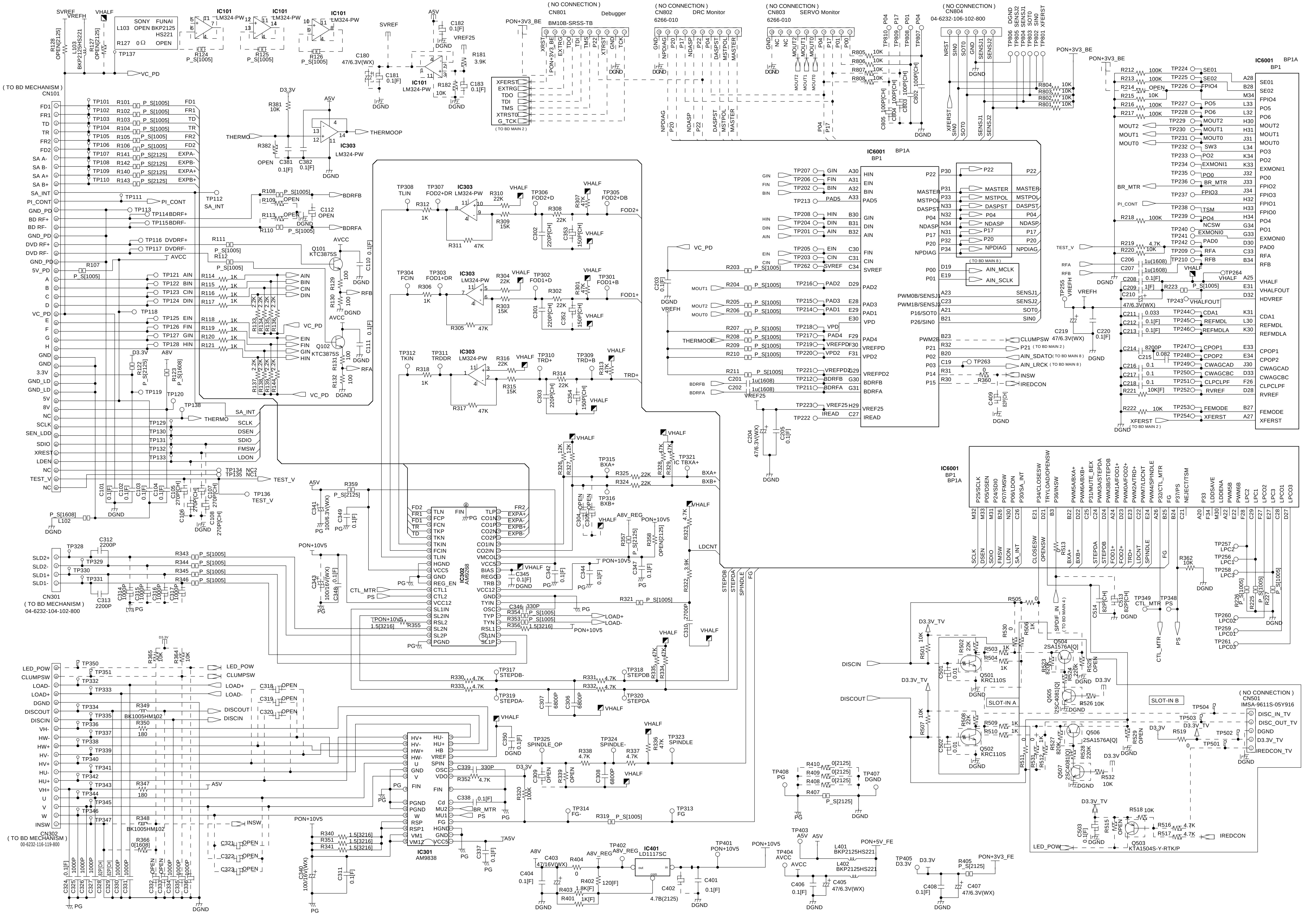
(TO AMP/PSU CBA CN9001)
CN6101
9180S-30Z05-T
PON+1V8
PON+1V8
PON+1V8
PON+5V-1
GND(PON+1V8)
USB+5V
GND(PON+1V8)
GND(PON+1V8)
PON+1V2
PON+10V5
PON+1V2
PON+10V5
PON+1V2
GND(PG)
GND(PON+1V2)
GND(PG)
GND(PON+1V2)
GND(PON+1V2)
PON+3V3
PON+3V3
FROM SD
SDDAT1
PON+5V-2
SDDAT0
SDWP
SDCD
SDDAT2
GND
SDDAT3
SDCLK
SDCMD
TP6106
TP6107
TP6101
TP6104
TP6111
TP6110
TP6108
TP6103
TP6102
TP6109
TP6105
TP7616
TP7601
TP7602
TP7603
TP7606
TP7607
TP7608
TP7609
TP7610
(TO BD MAIN 4)
PON+5V_FE
PON+3V3_BE
PON+3V3_FE
PON+1V2
USB+5V
DGND
PG
L6124
R-SHORT[1608]
C6194 0.1[FZ] [1608]
C6195 0.01[F]
C6196 1000P[BJ]
C6188 0.1[F]
C6189 0.1[F]
C6197 0.1[FZ] [1608]
C6198 0.01[F]
C6199 0.1[F]
C6190 0.1[FZ] [1608]
C6191 0.01[F]
C6192 100P
C6193 47P
C6200 0.1[FZ] [1608]
C6201 0.01[F]
C6202 100P
R6301
R6302
R6303
R6304
R6305
R6306
R6307
R6308
R-SHORT[1608]
IC6001
BP1A
PON+1V8
L6101
L6102
L6103
L6104
L6105
L6106
L6107
L6108
L6109
L6110
L6111
L6112
L6113
L6114
L6115
L6116
L6117
L6118
L6119
L6120
L6121
L6122
L6123
PON+1V2
PON+3V3_BE
VDDIO
VDDIOCK
VDD33
AVDD33A
AVSSA
AVDD33A1
AVSSA1
AVDD33D1
AVSSD1
AVDD33DRC
AVSSDRC
AVDDFEPC
AVSSFEPC
AVSSFEPB
VDD
AVDD12DRC
VDDR
VDDA
AVDD_DPLL
AVSS_DPLL
AVDD_APLL1
AVSS_APLL1
AVDD_MPLL_1
AVDD_MPLL_2
AVDDFEPA
AVSSFEPA
VSS
AVSS

BD Main 6 Schematic Diagram



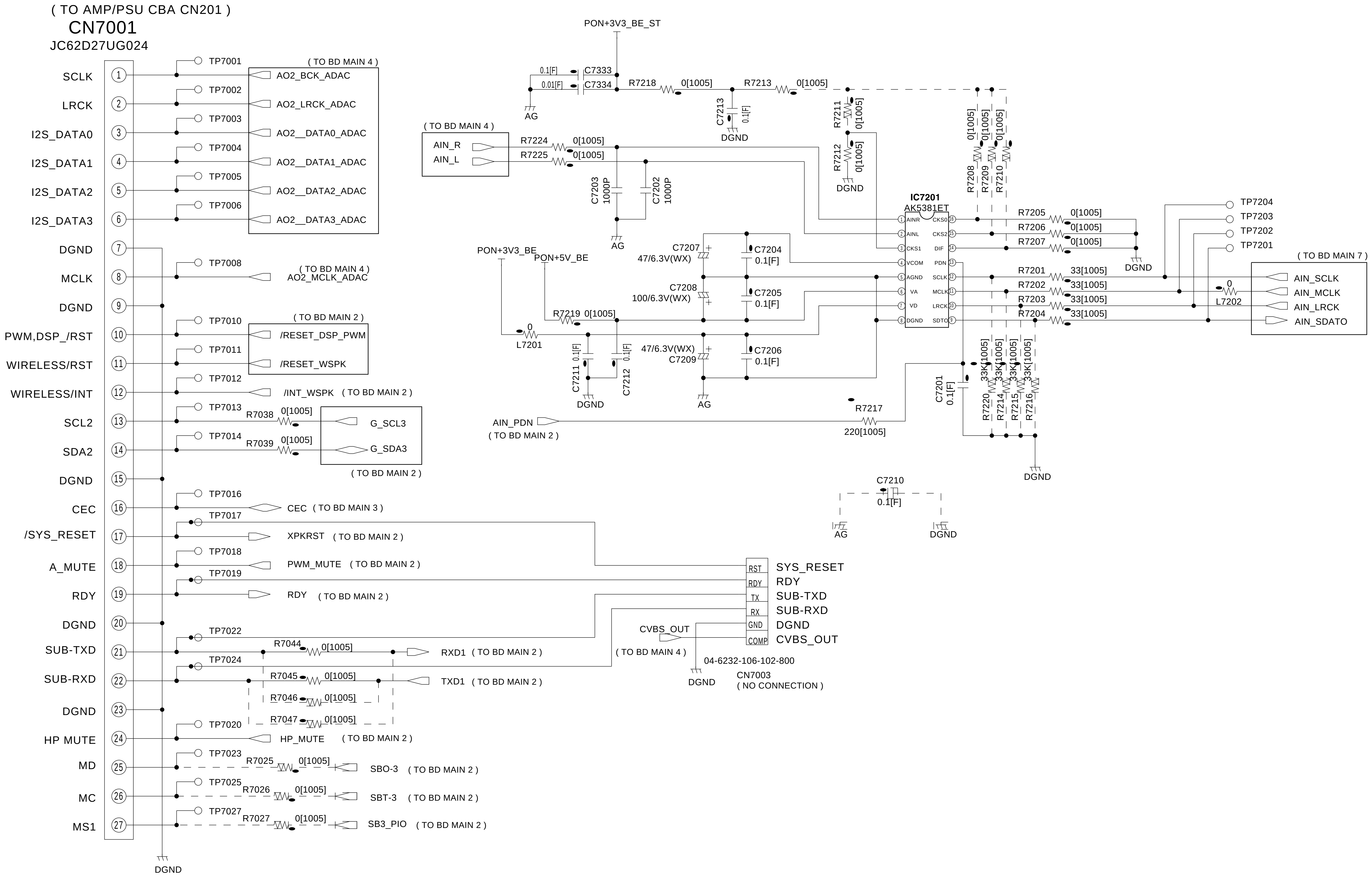
(TO BD MAIN 2)
G_CK25A
R6437
P_S[1005]
PON+3V3_BE
IC6001
BP1A (BASE : *DFF / MAGNA*AFF)
MII_TXCLK
MII_TXD0
MII_TXD1
MII_TXD2
MII_TXD3
MII_TXEN
MII_TXER
MII_RXCLK
MII_RXD0
MII_RXD1
MII_RXD2
MII_RXD3
MII_RXDV
MII_RXER
MII_CRS
MII_COL
MDC
MDIO
MII_INTL
PHYRSTL
WAKEUP
*R6401 100[1005]
*R6402 100[1005]
*R6403 100[1005]
*R6404 100[1005]
*R6405 100[1005]
*R6406 100[1005]
*R6416 100[1005]
R6417 100[1005]
R6418 P_S[1005]
*R6442 4.7K[1005]
R6443 4.7K[1005]
R6433 R6434 *R6445 R6426 R6432 R6420 R6427 R6428 R6421
*R6450 *R6447 *R6435 *R6448 *R6436 R6422 R6425 R6424 R6423 1K[1005]
*R6446 33K[1005]
*R6449 1K[1005]
DGND
*L6404 0
*C6401 10(2125)
*C6402 10(2125)
*C6406 0.1[F]
V1.8_OUT
L6401 0
*C6407 0.1[F]
*R6412 100[1005]
*R6407 100[1005]
*R6413 100[1005]
*R6408 *R6409 *R6410 *R6411 100[1005]
*C6405 100P
*R6431 6.49K[F1005]
*C6411 0P[CH]
*C6410 10P
*IC6401
KSZ8041TL
VDDIO_3.3
RXDV
RXC
RXER
GND
VDD_1.8
INTRP
TXC
TXEN
TXD0
TXD1
TXD2
TXD3
COL
CRS
LED0
LED1
NC
RST#
REXT
XI
XO
TX+
TX-
RX+
RX-
VDDA_3.3
V1.8_OUT
VDDA_1.8
L6402 P_S[1608]
L6403 P_S[1608]
C6403 C6408 C6404 C6409 C6415 C6414 C6413 C6412
10(2125) 0.1[F]
*TP6401
*R6415 100[1005]
*R6414 100[1005]
R6419 P_S[1005]
*R6438 *R6439 *R6440 *R6441 49.9[F] [1608]
*C6416 *C6417 0.1[B]
*C6418 *C6419 0.1[F]
R6444 P_S[1608]
*JK6401
RJSE1L5280-R
*R6429 220 [1608]
*R6430 220 [1608]
*D6401 SML-310VTT86K
*D6402 SML-310VTT86K

BD Main 7 Schematic Diagram

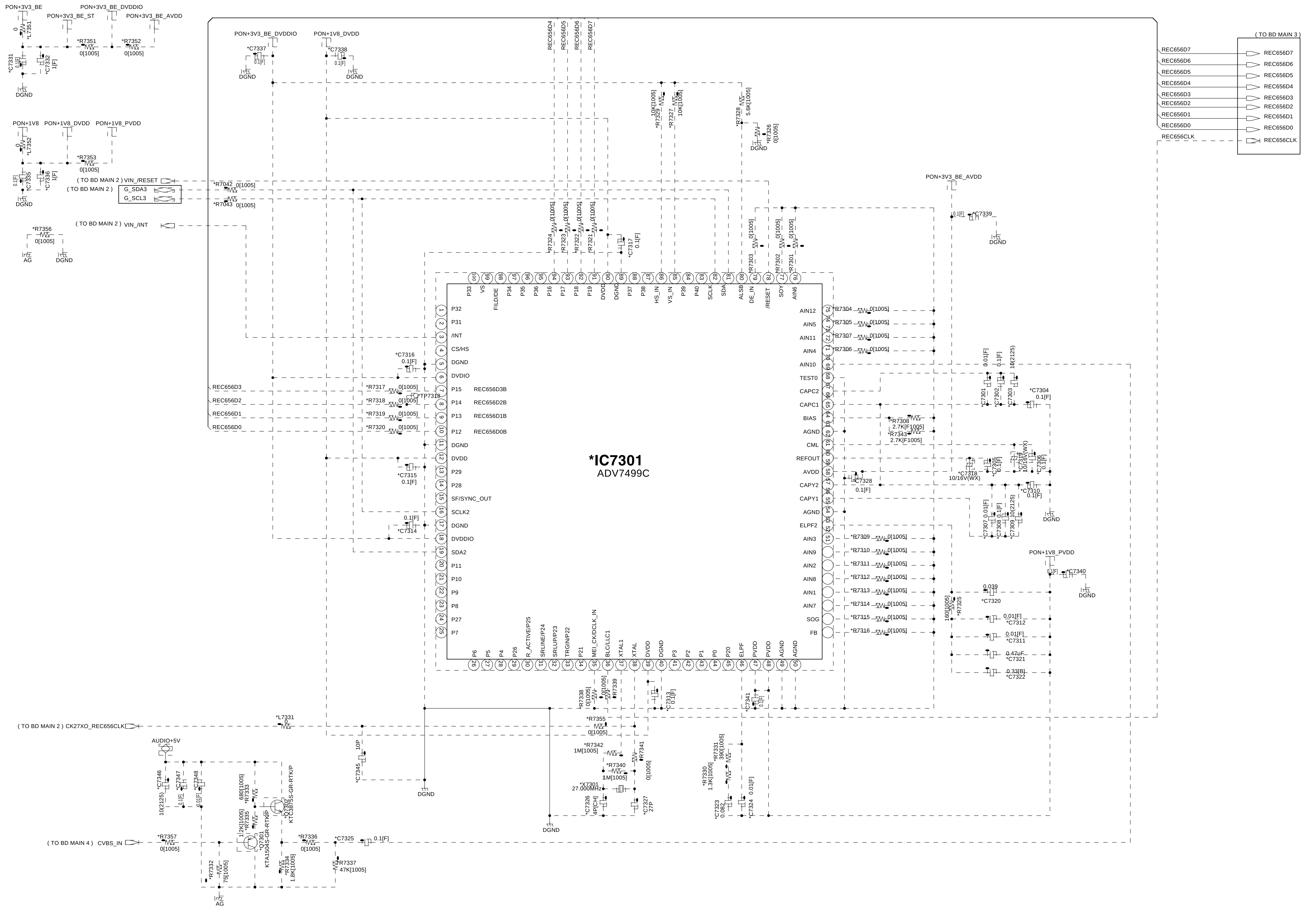


IC101 LM324-PW
IC303 LM324-PW
SONY FUNAI
L103 OPEN BKP2125
HS221
R127 0Ω OPEN
(TO BD MECHANISM)
CN101
(NO CONNECTION)
CN801
BM10B-SRSS-TB
Debugger
(NO CONNECTION)
CN802
6266-010
DRC Monitor
(NO CONNECTION)
CN803
6266-010
SERVO Monitor
(NO CONNECTION)
CN804
04-6232-106-102-800
IC6001
BP1
BP1A
IC302
AM9268
IC301
AM9838
IC401
LD1117SC
CN301
(TO BD MECHANISM)
04-6232-104-102-800
CN302
(TO BD MECHANISM)
00-6232-116-119-800
(NO CONNECTION)
CN501
IMSA-9611S-05Y916
SLOT-IN A
SLOT-IN B
Q101 KTC3875S
Q102 KTC3875S
Q501 KRC110S
Q502 KRC110S
Q503 KTA1504S-Y-RTK/P
Q504 2SA1576A[Q]
Q505 2SC4081[Q]
Q506 2SA1576A[Q]
Q507 2SC4081[Q]
L401 BKP2125HS221
L402 BKP2125HS221

BD Main 8 Schematic Diagram

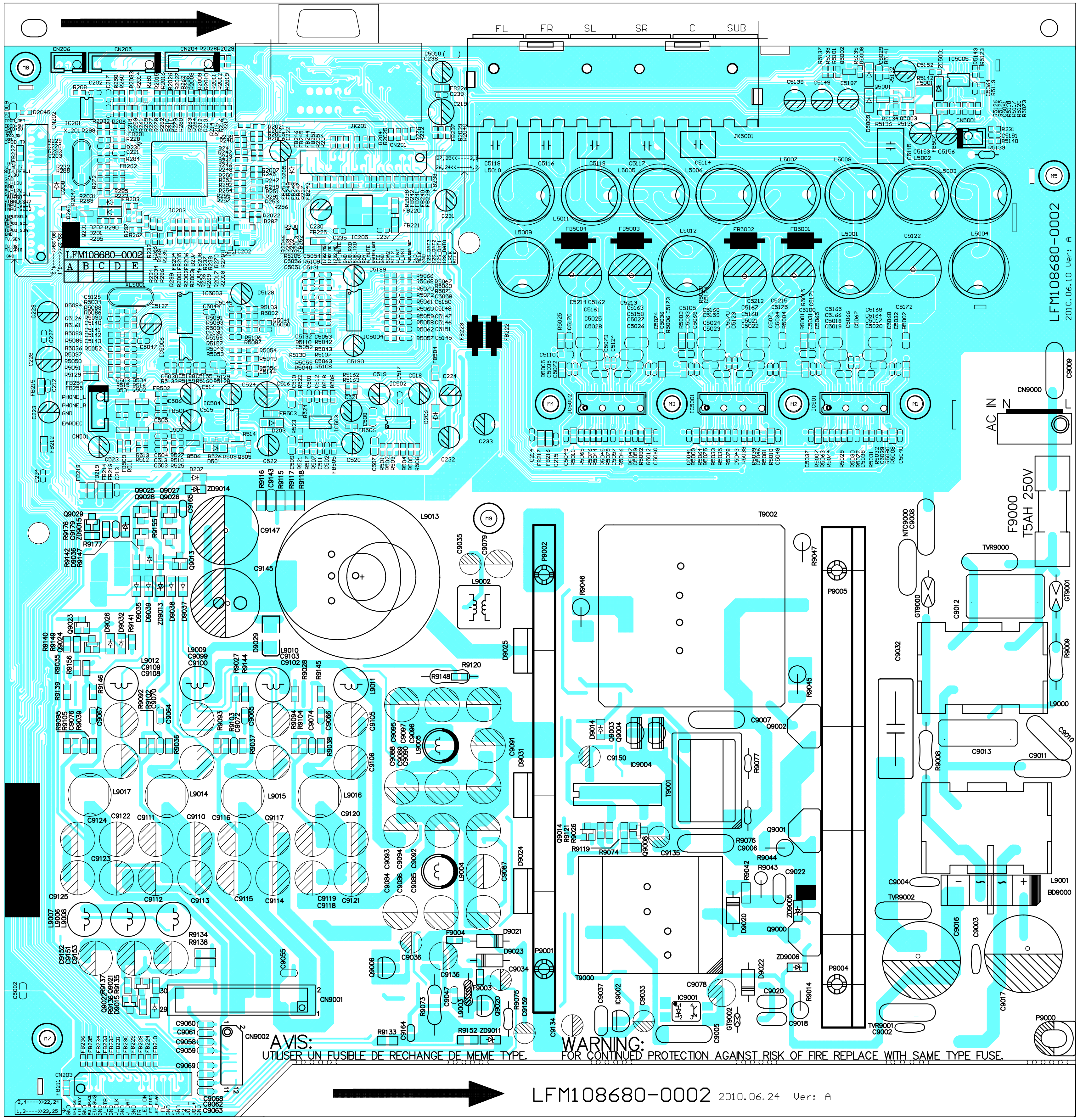

(TO AMP/PSU CBA CN201)
CN7001
JC62D27UG024
SCLK
LRCK
I2S_DATA0
I2S_DATA1
I2S_DATA2
I2S_DATA3
DGND
MCLK
DGND
PWM,DSP_/RST
WIRELESS/RST
WIRELESS/INT
SCL2
SDA2
DGND
CEC
/SYS_RESET
A_MUTE
RDY
DGND
SUB-TXD
SUB-RXD
DGND
HP MUTE
MD
MC
MS1
DGND
TP7001
TP7002
TP7003
TP7004
TP7005
TP7006
(TO BD MAIN 4)
AO2_BCK_ADAC
AO2_LRCK_ADAC
AO2__DATA0_ADAC
AO2__DATA1_ADAC
AO2__DATA2_ADAC
AO2__DATA3_ADAC
TP7008
(TO BD MAIN 4)
AO2_MCLK_ADAC
TP7010
(TO BD MAIN 2)
/RESET_DSP_PWM
TP7011
/RESET_WSPK
TP7012
/INT_WSPK (TO BD MAIN 2)
TP7013
R7038 0[1005]
G_SCL3
TP7014
R7039 0[1005]
G_SDA3
(TO BD MAIN 2)
TP7016
CEC (TO BD MAIN 3)
TP7017
XPKRST (TO BD MAIN 2)
TP7018
PWM_MUTE (TO BD MAIN 2)
TP7019
RDY (TO BD MAIN 2)
TP7022
R7044 0[1005]
RXD1 (TO BD MAIN 2)
TP7024
R7045 0[1005]
TXD1 (TO BD MAIN 2)
R7046 0[1005]
R7047 0[1005]
TP7020
HP_MUTE (TO BD MAIN 2)
TP7023
R7025 0[1005]
SBO-3 (TO BD MAIN 2)
TP7025
R7026 0[1005]
SBT-3 (TO BD MAIN 2)
TP7027
R7027 0[1005]
SB3_PIO (TO BD MAIN 2)
PON+3V3_BE_ST
0.1[F] C7333
0.01[F] C7334
AG
R7218 0[1005]
R7213 0[1005]
C7213 0.1[F]
DGND
R7211 0[1005]
R7212 0[1005]
DGND
0[1005] 0[1005] 0[1005]
R7208 R7209 R7210
(TO BD MAIN 4)
AIN_R
AIN_L
R7224 0[1005]
R7225 0[1005]
C7203 1000P
C7202 1000P
AG
IC7201
AK5381ET
AINR CKS0
AINL CKS2
CKS1 DIF
VCOM PDN
AGND SCLK
VA MCLK
VD LRCK
DGND SDTO
R7205 0[1005]
R7206 0[1005]
R7207 0[1005]
DGND
TP7204
TP7203
TP7202
TP7201
(TO BD MAIN 7)
R7201 33[1005]
R7202 33[1005]
R7203 33[1005]
R7204 33[1005]
0
L7202
AIN_SCLK
AIN_MCLK
AIN_LRCK
AIN_SDATO
PON+3V3_BE
PON+5V_BE
C7207 47/6.3V(WX)
C7204 0.1[F]
C7208 100/6.3V(WX)
C7205 0.1[F]
R7219 0[1005]
0
L7201
C7211 0.1[F]
C7212 0.1[F]
DGND
47/6.3V(WX) C7209
C7206 0.1[F]
AG
C7201 0.1[F]
33K[1005] 33K[1005] 33K[1005] 33K[1005]
R7220 R7214 R7215 R7216
R7217
220[1005]
AIN_PDN
(TO BD MAIN 2)
DGND
C7210
0.1[F]
AG
DGND
RST SYS_RESET
RDY RDY
TX SUB-TXD
RX SUB-RXD
GND DGND
COMP CVBS_OUT
CVBS_OUT
(TO BD MAIN 4)
04-6232-106-102-800
DGND
CN7003
(NO CONNECTION)

BD Main 9 Schematic Diagram



PON+3V3_BE
PON+3V3_BE_DVDDIO
PON+3V3_BE_ST
PON+3V3_BE_AVDD
*L7351
*R7351
0[1005]
*R7352
0[1005]
*C7331
*C7332
1[F]
DGND
PON+1V8
PON+1V8_DVDD
PON+1V8_PVDD
*L7352
*R7353
0[1005]
*C7335
*C7336
(TO BD MAIN 2) VIN_/RESET
(TO BD MAIN 2)
G_SDA3
G_SCL3
*R7042
0[1005]
*R7043
0[1005]
(TO BD MAIN 2) VIN_/INT
*R7356
0[1005]
AG
PON+3V3_BE_DVDDIO
PON+1V8_DVDD
*C7337
*C7338
REC656D4
REC656D5
REC656D6
REC656D7
*R7329
10K[1005]
*R7327
10K[1005]
*R7328
5.6K[1005]
*R7326
0[1005]
(TO BD MAIN 3)
REC656D7
REC656D6
REC656D5
REC656D4
REC656D3
REC656D2
REC656D1
REC656D0
REC656CLK
PON+3V3_BE_AVDD
*C7339
*R7324
*R7323
*R7322
*R7321
0[1005]
*C7317
0.1[F]
*R7303
*R7302
*R7301
0[1005]
*IC7301
ADV7499C
P32
P31
/INT
CS/HS
DGND
DVDIO
P15
P14
P13
P12
DGND
DVDD
P29
P28
SF/SYNC_OUT
SCLK2
DGND
DVDDIO
SDA2
P11
P10
P9
P8
P27
P7
REC656D3B
REC656D2B
REC656D1B
REC656D0B
P33
VS
FILD/DE
P34
P35
P36
P16
P17
P18
P19
DVDD
DGND
P37
P38
HS_IN
VS_IN
P39
P40
SCLK
SDA
ALSB
DE_IN
/RESET
SOY
AIN6
AIN12
AIN5
AIN11
AIN4
AIN10
TEST0
CAPC2
CAPC1
BIAS
AGND
CML
REFOUT
AVDD
CAPY2
CAPY1
AGND
ELPF2
AIN3
AIN9
AIN2
AIN8
AIN1
AIN7
SOG
FB
P6
P5
P4
P26
R_ACTIVE/P25
SRLINE/P24
SRLUP/P23
TRGIN/P22
P21
MEI_CK/DCLK_IN
BLC/LLC1
XTAL1
XTAL
DVDD
DGND
P3
P2
P1
P0
P20
ELPF
PVDD
PVDD
AGND
AGND
*C7316
0.1[F]
*R7317
*R7318
*R7319
*R7320
0[1005]
TP7318
*C7315
0.1[F]
*C7314
0.1[F]
REC656D3
REC656D2
REC656D1
REC656D0
*R7304
*R7305
*R7307
*R7306
0[1005]
*C7301
0.01[F]
*C7302
0.1[F]
*C7303
10(2125)
*C7304
0.1[F]
*R7308
2.7K[F1005]
*R7343
2.7K[F1005]
*C7318
10/16V(WX)
*C7305
0.1[F]
*C7319
10/16V(WX)
*C7306
0.1[F]
*C7328
0.1[F]
*C7310
0.1[F]
*C7307
0.01[F]
*C7308
0.1[F]
*C7309
10(2125)
*R7309
*R7310
*R7311
*R7312
*R7313
*R7314
*R7315
*R7316
0[1005]
PON+1V8_PVDD
*C7340
0.039
*C7320
160[1005]
*R7325
0.01[F]
*C7312
0.01[F]
*C7311
0.47uF
*C7321
0.33[B]
*C7322
*R7338
0[1005]
*R7339
0[1005]
*C7313
0.1[F]
*C7341
0.1[F]
(TO BD MAIN 2) CK27XO_REC656CLK
*L7331
*R7355
0[1005]
*R7342
1M[1005]
*R7341
0[1005]
*R7340
1M[1005]
*X7301
27.000MHz
*C7326
4P[CH]
*C7327
27P
*R7330
1.3K[1005]
*R7331
390[1005]
*C7323
0.082
*C7324
0.01[F]
AUDIO+5V
*C7346
10(2125)
*C7347
0.1[F]
*C7348
0.01[F]
*C7345
10P
DGND
*R7333
680[1005]
*R7335
12K[1005]
*Q7301
KTA1504S-GR-RTK/P
*Q7302
KTC3875S-GR-RTK/P
(TO BD MAIN 4) CVBS_IN
*R7357
0[1005]
*R7332
75[1005]
*R7334
1.8K[1005]
*R7336
0[1005]
*C7325
0.1[F]
*R7337
47K[1005]
AG

AMP/PSU CBA Top View


FL
FR
SL
SR
C
SUB
LFM108680-0002
2010.06.10 Ver: A
AC IN
N
L
CN9000
F9000
T5AH 250V
T9002
T9001
T9000
L9013
BD9000
AVIS:
UTILISER UN FUSIBLE DE RECHANGE DE MEME TYPE.
WARNING:
FOR CONTINUED PROTECTION AGAINST RISK OF FIRE REPLACE WITH SAME TYPE FUSE.
LFM108680-0002 2010.06.24 Ver: A

CAUTION !

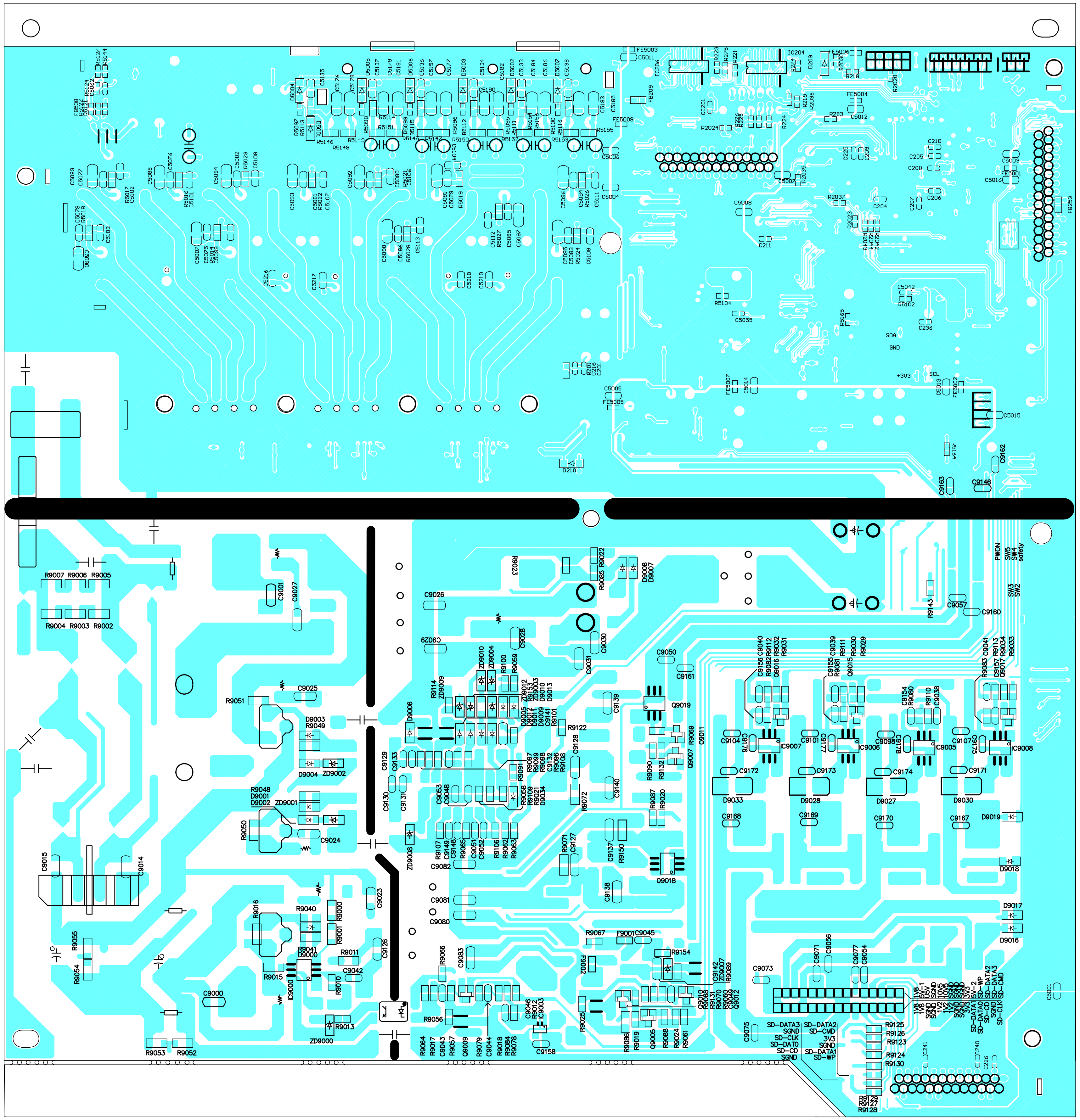
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F9000) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.

NOTE:

The voltage for parts in hot circuit is measured using hot GND as a common terminal.

Because a hot chassis ground is present in the power supply circuit, an isolation transformer must be used when repairing. Also, in order to have the ability to increase the input slowly, when troubleshooting this type of power supply circuit, a variable isolation transformer is required.

AMP/PSU CBA Bottom View



CAUTION !

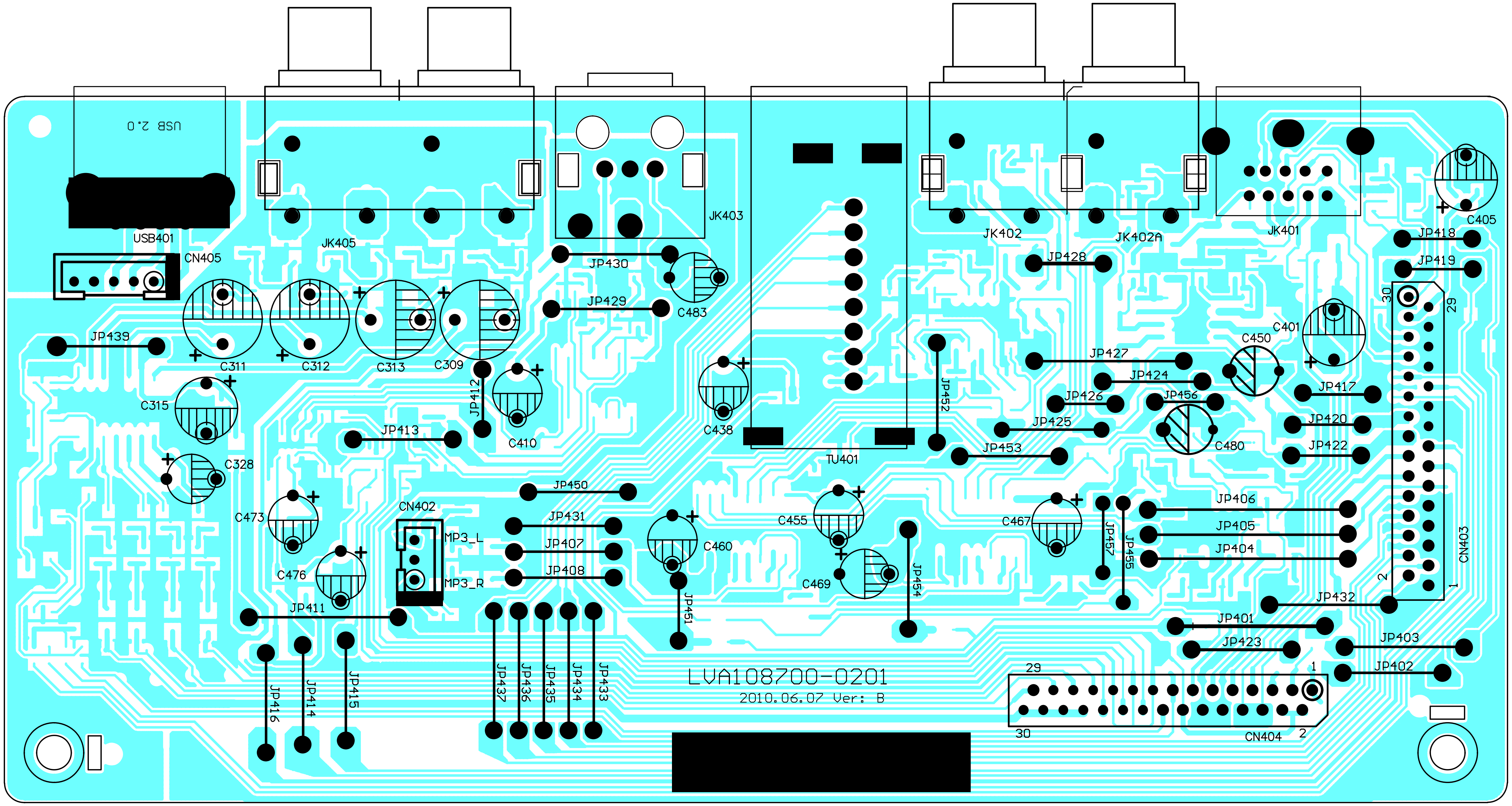
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F9000) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.

NOTE:

The voltage for parts in hot circuit is measured using hot GND as a common terminal.

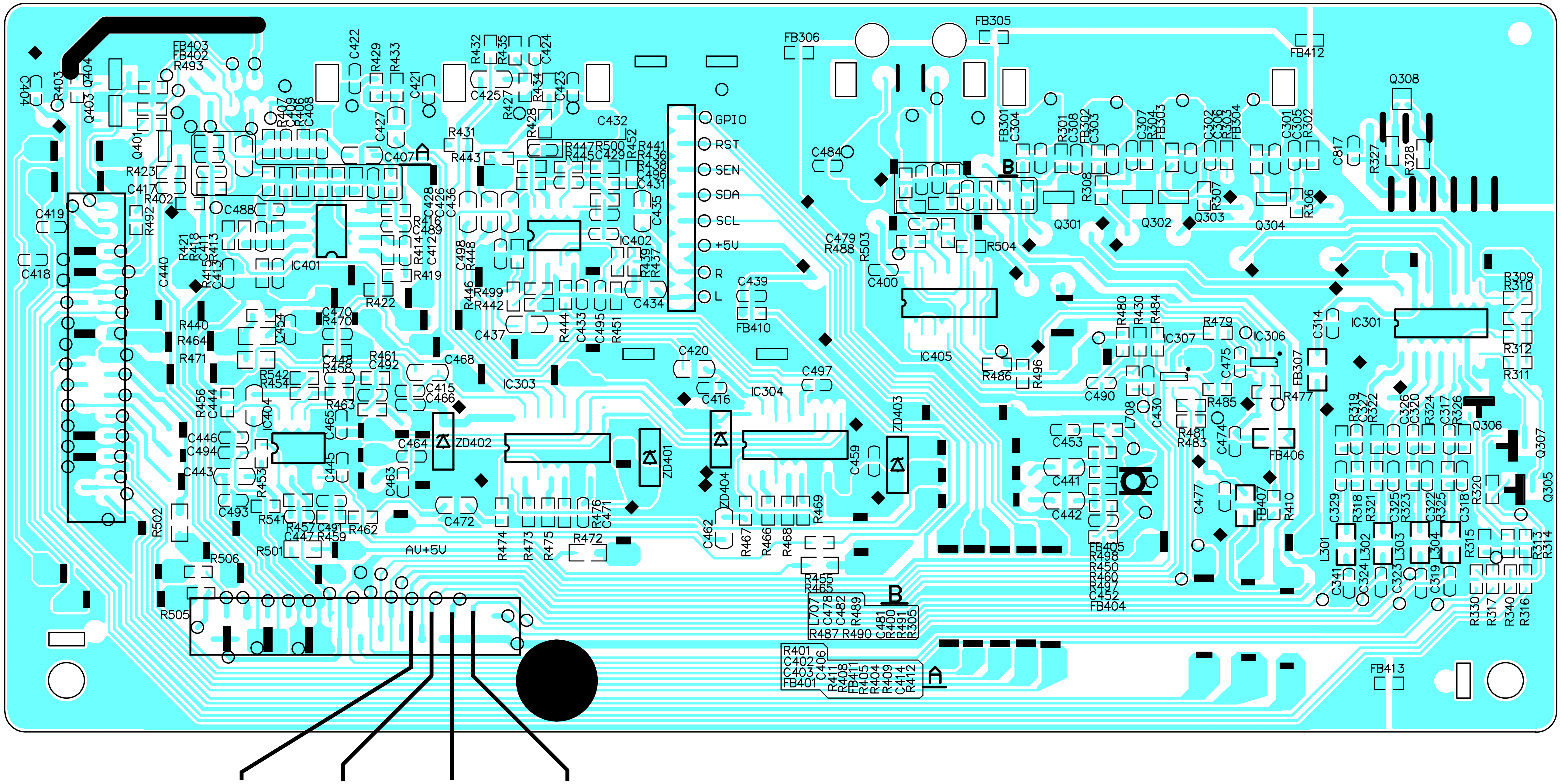
Because a hot chassis ground is present in the power supply circuit, an isolation transformer must be used when repairing. Also, in order to have the ability to increase the input slowly, when troubleshooting this type of power supply circuit, a variable isolation transformer is required.

AV CBA Top View



USB 2.0
USB401
CN405
JK405
JK403
TU401
JK402
JK402A
JK401
C405
JP418
JP419
JP430
JP429
C483
JP428
JP439
C311
C312
C313
C309
C315
C328
JP413
JP412
C410
C438
JP452
JP427
JP424
JP426
JP456
JP425
JP453
C450
C401
JP417
JP420
JP422
C480
30
29
CN403
2
1
JP450
JP431
JP407
JP408
CN402
MP3_L
MP3_R
C473
C476
JP411
C460
C455
C469
C467
JP451
JP454
JP457
JP455
JP406
JP405
JP404
JP432
JP401
JP423
JP403
JP402
JP416
JP414
JP415
JP437
JP436
JP435
JP434
JP433
LVA108700-0201
2010.06.07 Ver: B
29
1
30
2
CN404

AV CBA Bottom View


GPIO
RST
SEN
SDA
SCL
+5V
R
L
AV+5V
IC301
IC303
IC304
IC401
IC402
IC404
IC405
CN404

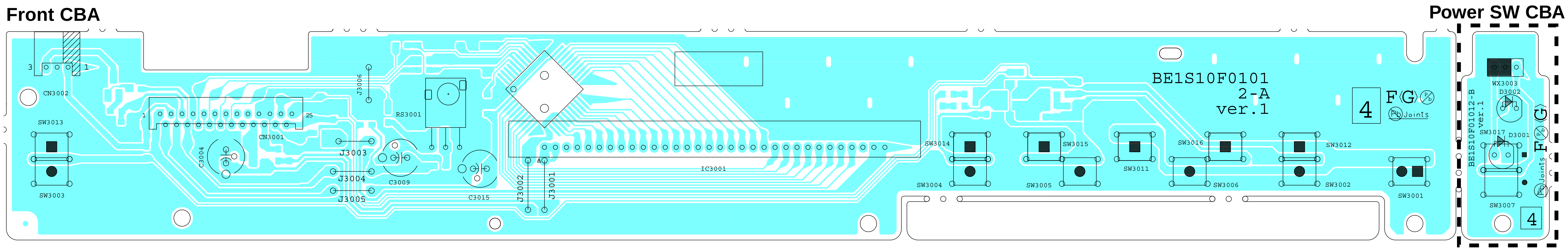
WF4
PIN 23 OF CN404

WF1
PIN 25 OF CN404

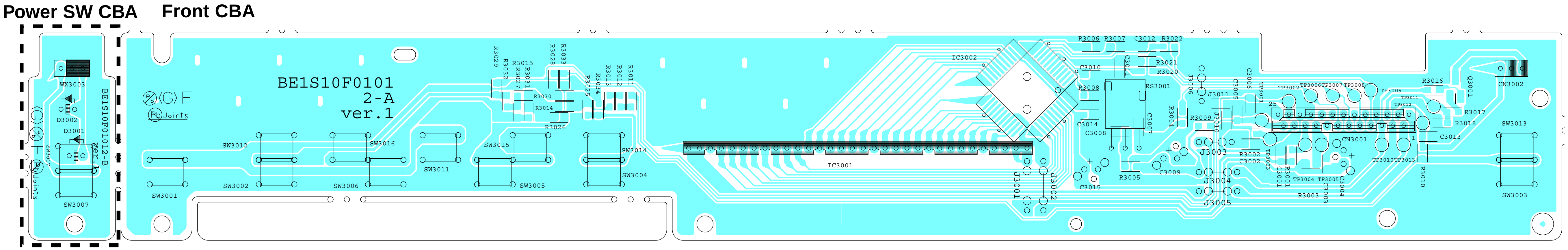
WF2
PIN 27 OF CN404

WF3
PIN 29 OF CN404

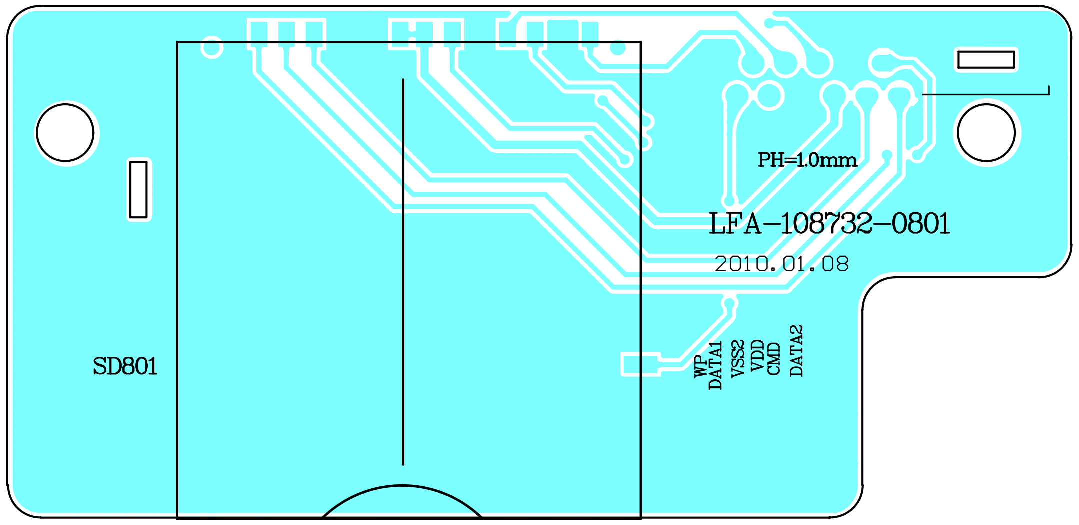
Front CBA & Power SW CBA Top View


Front CBA
Power SW CBA
CN3002
SW3013
SW3003
CN3001
C3004
J3006
J3003
J3004
J3005
C3009
RS3001
C3015
J3002
J3001
IC3001
SW3014
SW3004
SW3015
SW3005
SW3011
SW3016
SW3006
SW3012
SW3002
SW3001
BE1S10F0101
2-A
ver.1
4
Joints
BE1S10F01012-B
ver.1
WX3003
D3002
SW3017
D3001
SW3007
4

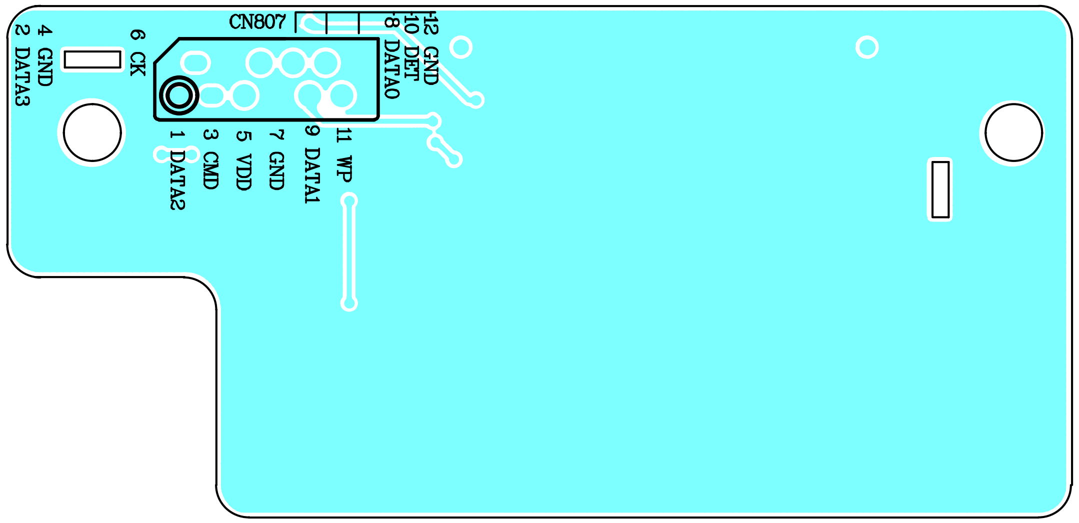
Front CBA & Power SW CBA Bottom View


Power SW CBA
Front CBA
WX3003
D3002
D3001
SW3007
BE1S10F01012-B
ver.1
Joints
BE1S10F0101
2-A
ver.1
SW3012
SW3002
SW3001
SW3016
SW3006
SW3011
SW3015
SW3005
SW3014
SW3004
R3029
R3032
R3015
R3027
R3031
R3028
R3033
R3030
R3014
R3026
R3025
R3034
R3013
R3012
R3011
IC3002
IC3001
J3001
J3002
R3006
R3007
C3012
R3022
C3010
C3011
R3021
R3020
R3008
RS3001
C3014
C3008
C3007
R3004
R3009
J3006
J3011
C3006
C3005
J3010
J3003
J3004
J3005
R3005
C3009
C3015
R3002
C3002
TP3001
TP3002
TP3006
TP3007
TP3008
TP3009
TP3004
TP3005
C3001
R3001
R3003
C3003
C3004
CN3001
TP3010
TP3013
R3016
Q3001
R3017
R3018
C3013
R3010
CN3002
SW3013
SW3003

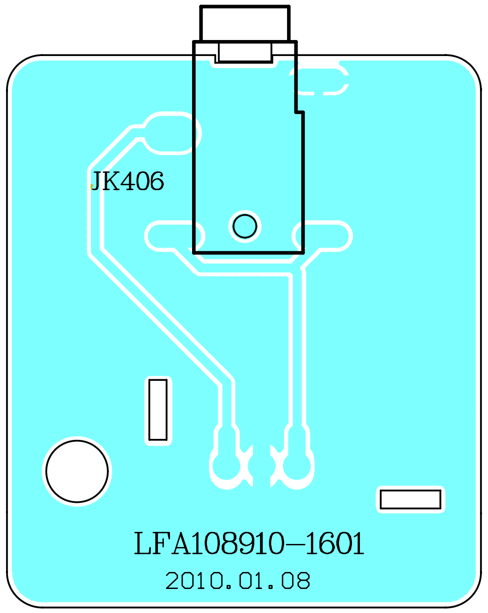
SD Card CBA Top View


PH=1.0mm
LFA–108732–0801
2010.01.08
SD801
WP
DATA1
VSS2
VDD
CMD
DATA2

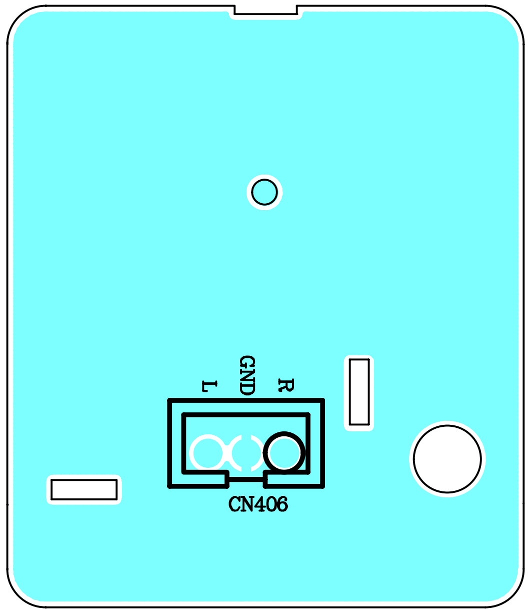
SD Card CBA Bottom View


CN807
2 DATA3
4 GND
6 CK
8 DATA0
10 DET
12 GND
1 DATA2
3 CMD
5 VDD
7 GND
9 DATA1
11 WP

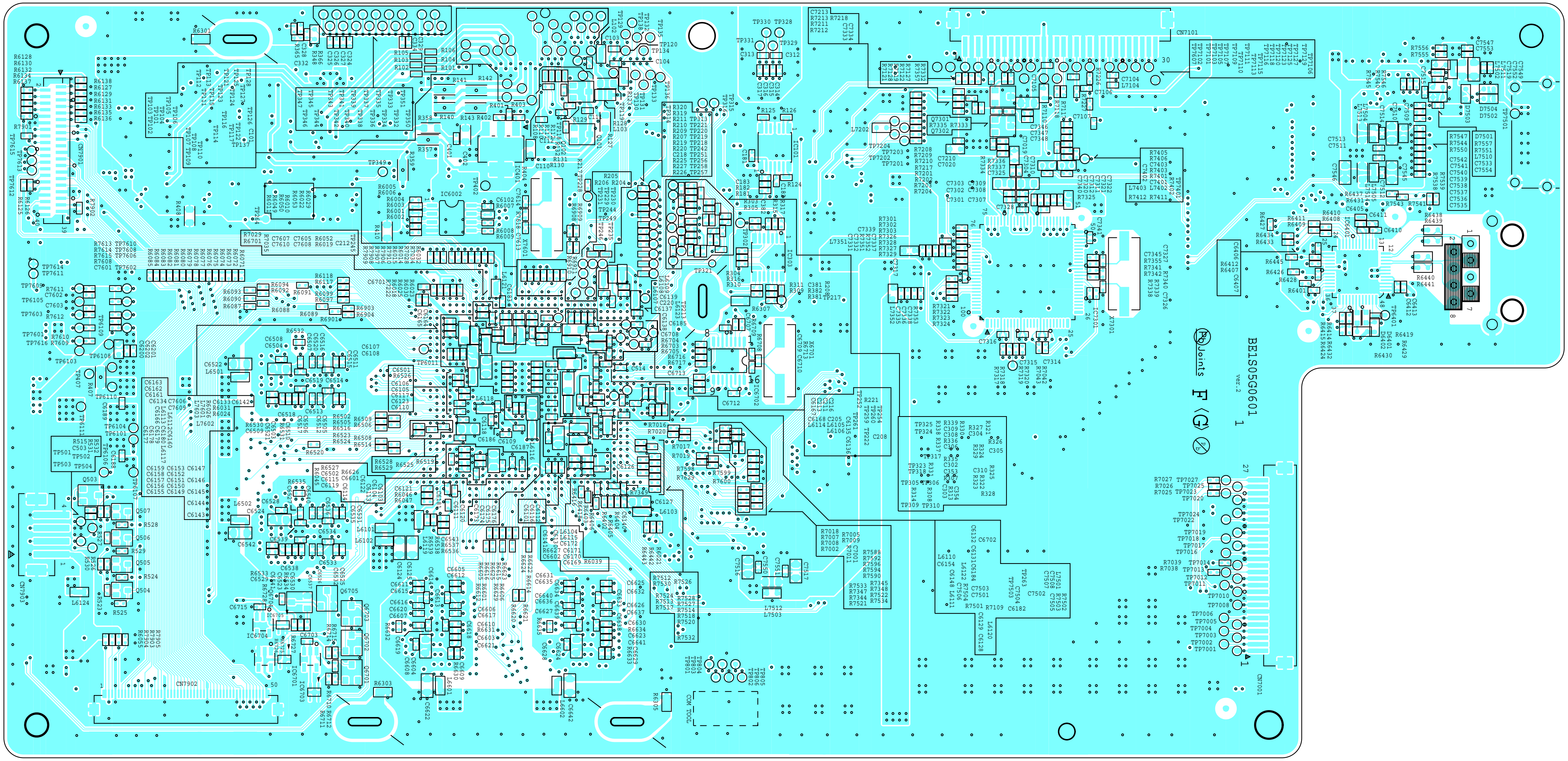
MP3 CBA Top View


JK406
LFA108910–1601
2010.01.08

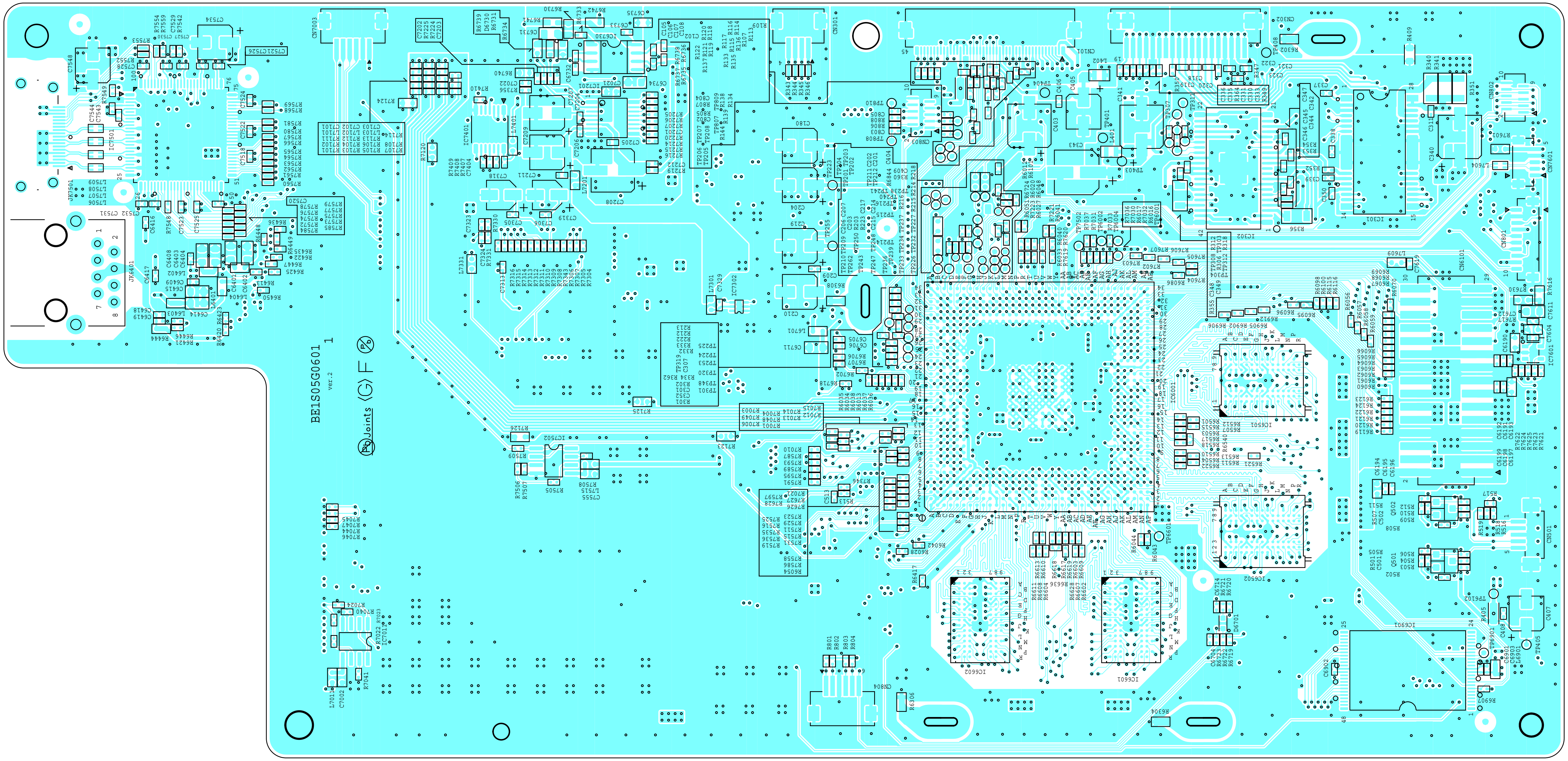
MP3 CBA Bottom View


L
GND
R
CN406

BD Main CBA Top View



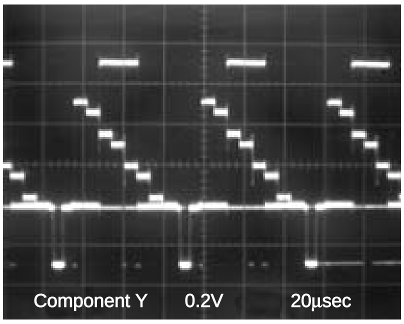
BD Main CBA Bottom View



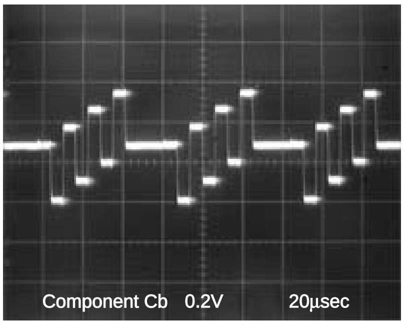
WAVEFORMS

NOTE:
Input: COLOR BAR SIGNAL
(WITH 1KHz AUDIO SIGNAL)

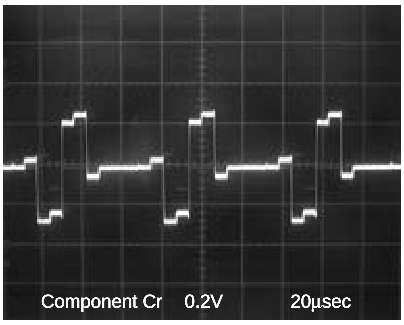
WF1 Pin 25 of CN404



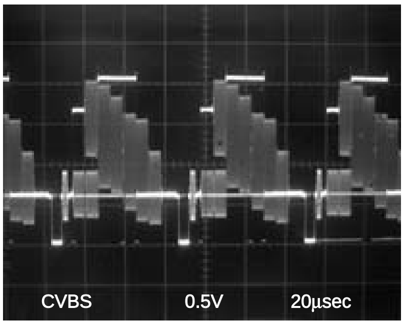
WF2 Pin 27 of CN404



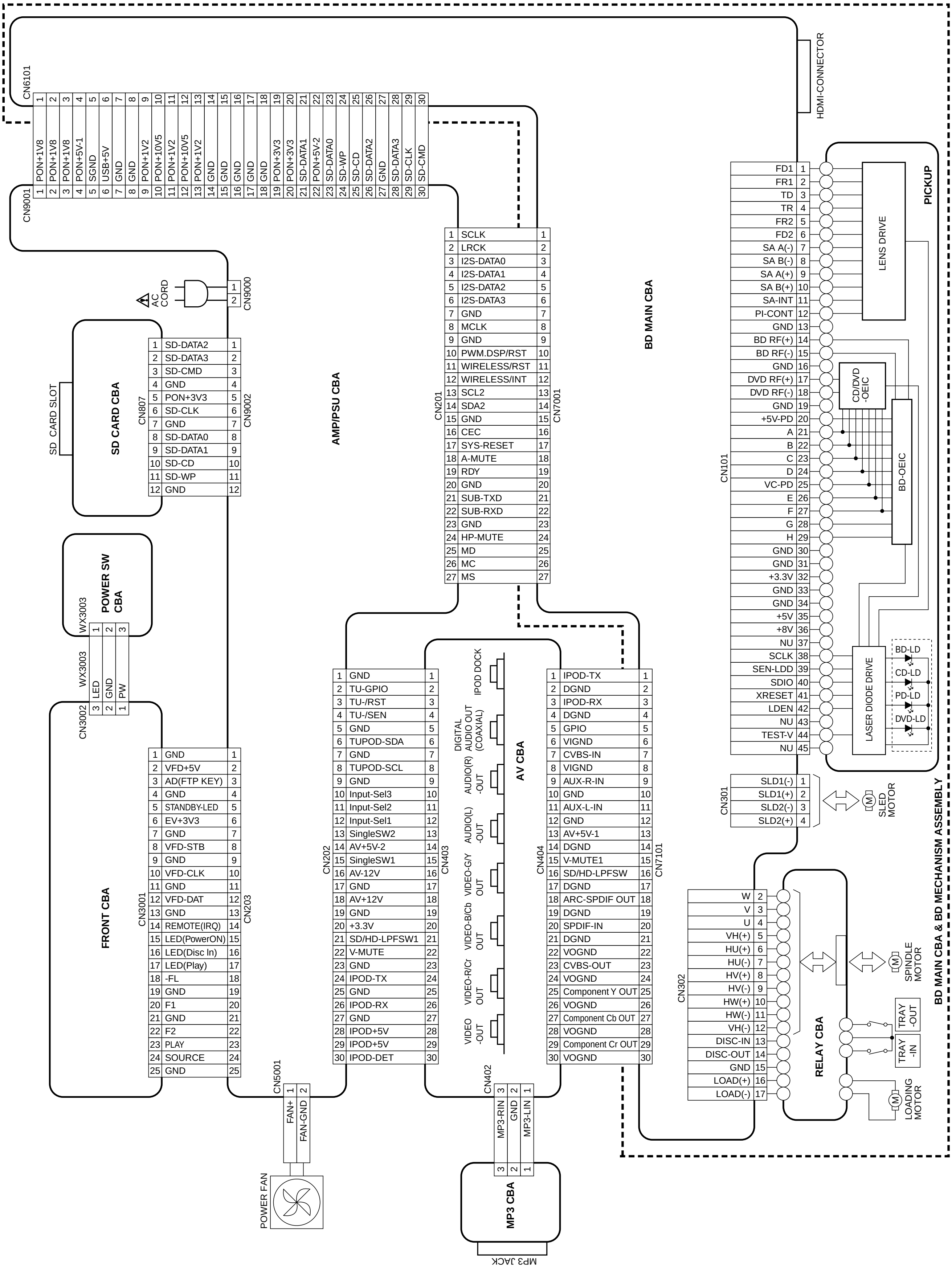
WF3 Pin 29 of CN404



WF4 Pin 23 of CN404

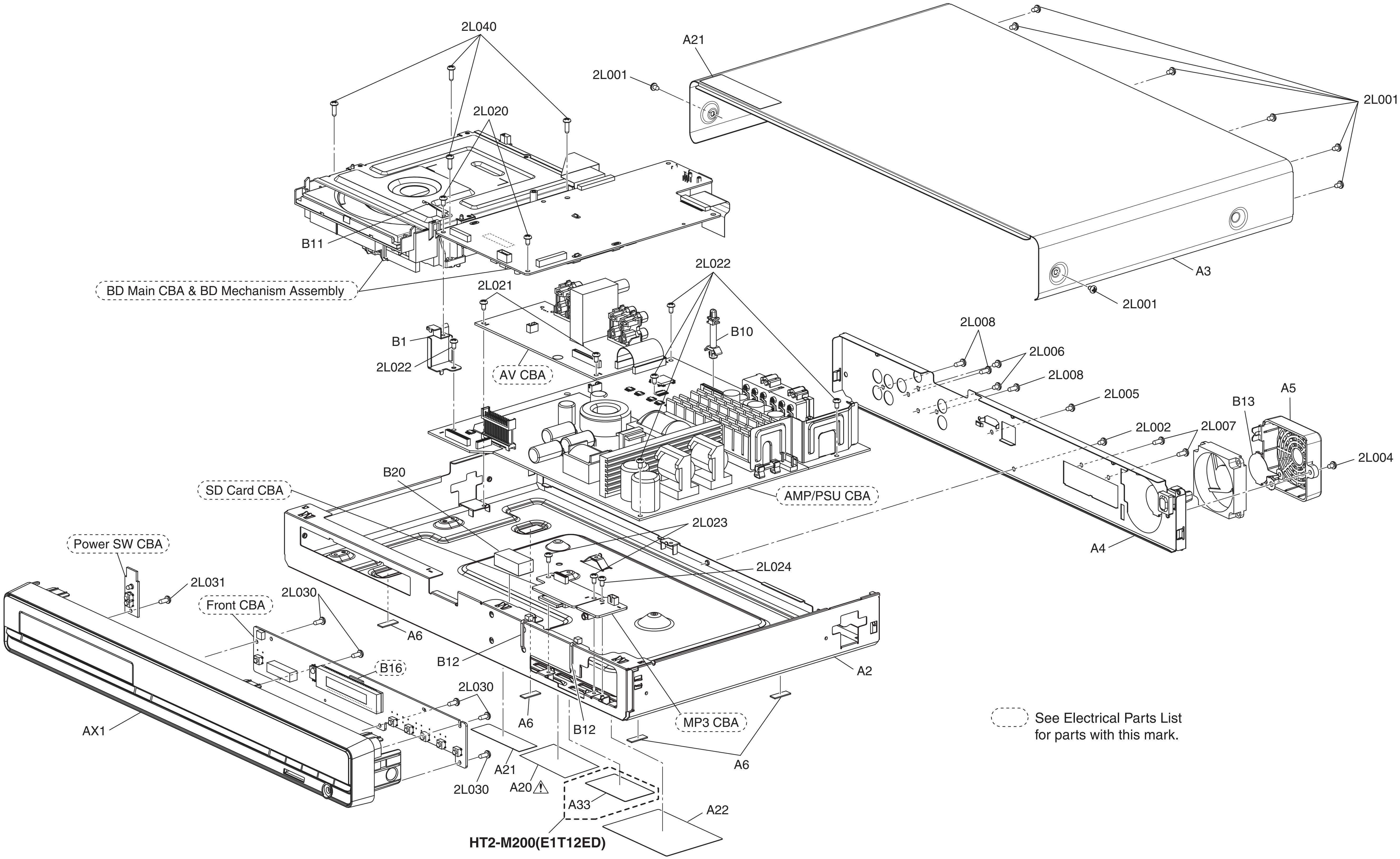


WIRING DIAGRAM


CN6101
CN9001
1 PON+1V8
2 PON+1V8
3 PON+1V8
4 PON+5V-1
5 SGND
6 USB+5V
7 GND
8 GND
9 PON+1V2
10 PON+10V5
11 PON+1V2
12 PON+10V5
13 PON+1V2
14 GND
15 GND
16 GND
17 GND
18 GND
19 PON+3V3
20 PON+3V3
21 SD-DATA1
22 PON+5V-2
23 SD-DATA0
24 SD-WP
25 SD-CD
26 SD-DATA2
27 GND
28 SD-DATA3
29 SD-CLK
30 SD-CMD
HDMI-CONNECTOR
AC CORD
CN9000
SD CARD SLOT
SD CARD CBA
CN807
CN9002
1 SD-DATA2
2 SD-DATA3
3 SD-CMD
4 GND
5 PON+3V3
6 SD-CLK
7 GND
8 SD-DATA0
9 SD-DATA1
10 SD-CD
11 SD-WP
12 GND
AMP/PSU CBA
CN201
CN7001
1 SCLK
2 LRCK
3 I2S-DATA0
4 I2S-DATA1
5 I2S-DATA2
6 I2S-DATA3
7 GND
8 MCLK
9 GND
10 PWM.DSP/RST
11 WIRELESS/RST
12 WIRELESS/INT
13 SCL2
14 SDA2
15 GND
16 CEC
17 SYS-RESET
18 A-MUTE
19 RDY
20 GND
21 SUB-TXD
22 SUB-RXD
23 GND
24 HP-MUTE
25 MD
26 MC
27 MS
BD MAIN CBA
CN101
FD1 1
FR1 2
TD 3
TR 4
FR2 5
FD2 6
SA A(-) 7
SA B(-) 8
SA A(+) 9
SA B(+) 10
SA-INT 11
PI-CONT 12
GND 13
BD RF(+) 14
BD RF(-) 15
GND 16
DVD RF(+) 17
DVD RF(-) 18
GND 19
+5V-PD 20
A 21
B 22
C 23
D 24
VC-PD 25
E 26
F 27
G 28
H 29
GND 30
GND 31
+3.3V 32
GND 33
GND 34
+5V 35
+8V 36
NU 37
SCLK 38
SEN-LDD 39
SDIO 40
XRESET 41
LDEN 42
NU 43
TEST-V 44
NU 45
PICKUP
LENS DRIVE
CD/DVD -OEIC
BD-OEIC
LASER DIODE DRIVE
BD-LD
CD-LD
PD-LD
DVD-LD
CN301
SLD1(-) 1
SLD1(+) 2
SLD2(-) 3
SLD2(+) 4
M
SLED MOTOR
BD MAIN CBA & BD MECHANISM ASSEMBLY
POWER SW CBA
WX3003
1 LED
2 GND
3 PW
CN3002
FRONT CBA
CN3001
CN203
1 GND
2 VFD+5V
3 AD(FTP KEY)
4 GND
5 STANDBY-LED
6 EV+3V3
7 GND
8 VFD-STB
9 GND
10 VFD-CLK
11 GND
12 VFD-DAT
13 GND
14 REMOTE(IRQ)
15 LED(PowerON)
16 LED(Disc In)
17 LED(Play)
18 -FL
19 GND
20 F1
21 GND
22 F2
23 PLAY
24 SOURCE
25 GND
CN202
CN403
1 GND
2 TU-GPIO
3 TU-/RST
4 TU-/SEN
5 GND
6 TUPOD-SDA
7 GND
8 TUPOD-SCL
9 GND
10 Input-Sel3
11 Input-Sel2
12 Input-Sel1
13 SingleSW2
14 AV+5V-2
15 SingleSW1
16 AV-12V
17 GND
18 AV+12V
19 GND
20 +3.3V
21 SD/HD-LPFSW1
22 V-MUTE
23 GND
24 IPOD-TX
25 GND
26 IPOD-RX
27 GND
28 IPOD+5V
29 IPOD+5V
30 IPOD-DET
AV CBA
IPOD DOCK
DIGITAL AUDIO OUT (COAXIAL)
AUDIO(R) -OUT
AUDIO(L) -OUT
VIDEO-G/Y OUT
VIDEO-B/Cb OUT
VIDEO-R/Cr OUT
VIDEO -OUT
CN404
CN7101
1 IPOD-TX
2 DGND
3 IPOD-RX
4 DGND
5 GPIO
6 VIGND
7 CVBS-IN
8 VIGND
9 AUX-R-IN
10 GND
11 AUX-L-IN
12 GND
13 AV+5V-1
14 DGND
15 V-MUTE1
16 SD/HD-LPFSW
17 DGND
18 ARC-SPDIF OUT
19 DGND
20 SPDIF-IN
21 DGND
22 VOGND
23 CVBS-OUT
24 VOGND
25 Component Y OUT
26 VOGND
27 Component Cb OUT
28 VOGND
29 Component Cr OUT
30 VOGND
CN302
W 2
V 3
U 4
VH(+) 5
HU(+) 6
HU(-) 7
HV(+) 8
HV(-) 9
HW(+) 10
HW(-) 11
VH(-) 12
DISC-IN 13
DISC-OUT 14
GND 15
LOAD(+) 16
LOAD(-) 17
RELAY CBA
SPINDLE MOTOR
TRAY -OUT
TRAY -IN
LOADING MOTOR
CN5001
1 FAN+
2 FAN-GND
POWER FAN
CN402
1 MP3-LIN
2 GND
3 MP3-RIN
MP3 CBA
MP3 JACK

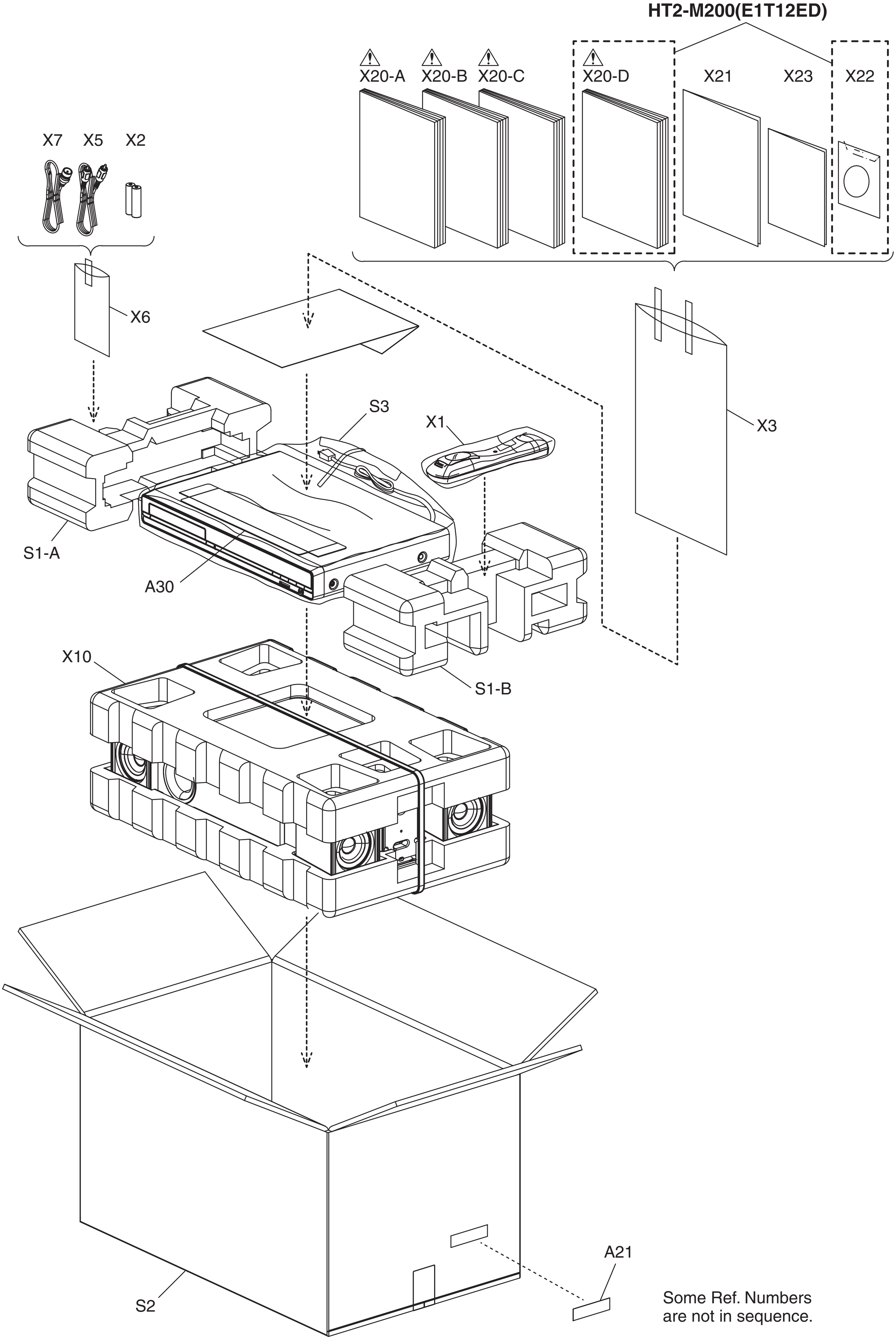
EXPLODED VIEWS

Cabinet


2L040
A21
2L001
2L020
2L001
B11
BD Main CBA & BD Mechanism Assembly
2L022
2L021
A3
2L001
B10
B1
2L022
AV CBA
2L008
2L006
2L008
2L005
A5
B13
2L002
2L007
2L004
B20
SD Card CBA
AMP/PSU CBA
2L023
A4
Power SW CBA
2L024
2L031
2L030
Front CBA
A6
B12
B16
A2
2L030
A6
B12
MP3 CBA
AX1
A21
A20
2L030
A33
A6
A22
HT2-M200(E1T12ED)

See Electrical Parts List for parts with this mark.

Packing



HT2-M200(E1T12ED)
X20-A
X20-B
X20-C
X20-D
X21
X23
X22
X7
X5
X2
X6
X3
S3
X1
S1-A
A30
S1-B
X10
A21
S2

Some Ref. Numbers
are not in sequence.

MECHANICAL PARTS LIST

PRODUCT SAFETY NOTE: Products marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice in this service manual. Don't degrade the safety of the product through improper servicing.

NOTE: Parts that are not assigned part numbers (---------) are not available.

Comparison Chart of Models and Marks

Model	Mark
HT2-M200(E1T12ED)	A
HT2-M200(E1T13ED)	B

Ref. No.	Mark	Description	Part No.
AX1		FRONT ASSEMBLY E1T10ED	1VM125099
A2		CHASSIS E1S00UD	1VM124240
A3		TOP COVER E1S10UD	1VM333159
A4		REAR PANEL E1T10ED	1VM334537
A5		FAN COVER E1S00UD	1VM332438
A6		FOOT E5730JD	0VM415425
A20⚠	A	RATING LABEL E1T12ED	----------
A20⚠	B	RATING LABEL E1T13ED	----------
A21		BARCODE LABEL UNFIGURE E9704ED or	----------
		BAR CODE LABEL E1T12ED	----------
A22		LICENSE LABEL E1S00UD	----------
A30		TOPPER POP E1T12ED	----------
A33	A	WARNING LABEL 2 HM454ED	----------
2L001		SCREW TAP TIGHT M3X5 BIND HEAD+BLK NI	GBHC3050
2L002		SCREW TAP TIGHT M3X5 BIND HEAD+BLK NI	GBHC3050
2L004		SCREW TAP TIGHT M3X5 BIND HEAD+BLK NI	GBHC3050
2L005		SCREW TAP TIGHT M3X5 BIND HEAD+BLK NI	GBHC3050
2L006		SCREW TAP TIGHT M3X5 BIND HEAD+BLK NI	GBHC3050
2L007		SCREW B-TIGHT M3X8 BIND HEAD+	GBHB3080
2L008		SCREW B-TIGHT M3X8 BIND HEAD+	GBHB3080
2L020		SCREW C-TIGHT M3X6 E5610UD	0VM412937A
2L021		SCREW C-TIGHT M3X6 E5610UD	0VM412937A
2L022		SCREW C-TIGHT M3X6 E5610UD	0VM412937A
2L023		SCREW C-TIGHT M3X6 E5610UD	0VM412937A
2L024		SCREW C-TIGHT M3X6 E5610UD	0VM412937A
2L030		SCREW P-TIGHT M3X8 BIND HEAD+	GBJP3080
2L031		SCREW P-TIGHT M3X8 BIND HEAD+	GBJP3080
2L040		SCREW S-TIGHT M3X10 E5610UD	0VM412936A
B1		PCB BRACKET FRONT E1S00UD	1VM332224
B10		LOCKING CARD SPACER KGLS-16S	XP00300WD001
B11		M-PCB PLATE EARTH E7A00UD	1VM423358
B12		LEAD CLAMPER 100MM	1790356
B13		FAN EARTH PLATE E1S00UD	1VM333557
B20		RUBBER E1S00UD	1VM434380
		PACKING	
S1-A		SIDE PAD L E1S10UD	1VM021772
S1-B		SIDE PAD R E1S10UD	1VM021773
S2		GIFT BOX CARTON E1T12ED	1VM334597
S3		SET BAG E1S00UD	1VM435780
		ACCESSORIES	
X1		REMOTE CONTROL UNIT NC002ED	NC002ED
X2		MANGANESE DRY BATTERY R6UWC/2STA or	XB0M311MS003
		MANGANESE DRY BATTERY R6UWC/2SK or	XB0M311MS002
		DRY BATTERY ES-GR6M-C	XB0M571GLP01
X3		ACCESSORY BAG E5795ED	0VM416059
X5		AV CORD WPZ1520TM002 or	WPZ1520TM002
		AV CORD WPZ152SCP003	WPZ152SCP003
X6		BAG REMOCON STD REMOCON	0VM406766
X7		FM ANTENNA CABLE	WX1E9000-081
X10		5.1CH SPEAKER UNIT AND50410B-FA01	USPSPKHYE002
X20-A⚠	A	OWNERS MANUAL(EN) E1T12ED	1VMN29873
X20-A⚠	B	OWNERS MANUAL(FR) E1T13ED	1VMN30013
X20-B⚠	A	OWNERS MANUAL(DE) E1T12ED	1VMN29893
X20-B⚠	B	OWNERS MANUAL(IT) E1T13ED	1VMN30014
X20-C⚠	A	OWNERS MANUAL(PL) E1T12ED	1VMN29894
X20-C⚠	B	OWNERS MANUAL(ES) E1T13ED	1VMN30015
X20-D⚠	A	OWNERS MANUAL(CS) E1T12ED	1VMN29895
X21		QUICK GUIDE E1T12ED	1VMN29874
X22	A	OWNERS MANUAL CD-ROM E1T12ED	1VM334897
X23		WARRANTY SHEET E3TF0ED	1VMN29433A

ELECTRICAL PARTS LIST

PRODUCT SAFETY NOTE: Products marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice in this service manual. Don't degrade the safety of the product through improper servicing.

NOTES:

1. Parts that are not assigned part numbers (---------) are not available.
2. Tolerance of Capacitors and Resistors are noted with the following symbols.

C.....±0.25%	D.....±0.5%	F.....±1%
G.....±2%	J......±5%	K.....±10%
M.....±20%	N.....±30%	Z.....+80/-20%

BD MAIN CBA & BD MECHANISM ASSEMBLY

Ref. No.	Description	Part No.
	BD MAIN CBA & BD MECHANISM ASSEMBLY	N77G1CEN

AV CBA

Ref. No.	Description	Part No.
	AV CBA	UPB000ESC017

SD CARD CBA

Ref. No.	Description	Part No.
	SD CARD CBA	UPB000ESC009

MP3 CBA

Ref. No.	Description	Part No.
	MP3 CBA	UPB000ESC004

AMP/PSU CBA

Ref. No.	Description	Part No.
	AMP/PSU CBA	UPBAMPESC004

FRONT ASSEMBLY

Ref. No.	Description	Part No.
	FRONT ASSEMBLY Consists of the following:	1VSA25926
	FRONT CBA POWER SW CBA	---------- ----------

FRONT CBA

Ref. No.	Description	Part No.
	FRONT CBA Consists of the following:	----------
CAPACITORS		
C3001	CHIP CERAMIC CAP.(1608) F Z 0.1µF/25V	CHD1EZ30F104
C3002	CHIP CERAMIC CAP.(1608) F Z 0.1µF/25V	CHD1EZ30F104
C3003	CHIP CERAMIC CAP.(1608) F Z 0.1µF/25V	CHD1EZ30F104
C3004	ELECTROLYTIC CAP. 22µF/50V/M/H7 or	CEF22RENW025
	CAP ELECTROLYTIC 22µF/50V/M/H7 or	CA1J220ENE10
	ELECTROLYTIC CAP. 22µF/50V M H7	CE1JMAVSL220
C3005	CHIP CERAMIC CAP. CH J 27pF/50V	CHD1JJ3CH270
C3006	CHIP CERAMIC CAP. CH J 27pF/50V	CHD1JJ3CH270
C3008	CHIP CERAMIC CAP.(1608) F Z 0.1µF/25V	CHD1EZ30F104
C3009	ELECTROLYTIC CAP. 100µF/10V/M/H7 or	CEB101ENW025
	CAP ELECTROLYTIC 100µF/10V/M/H7 or	CA1A101ENE10
	ELECTROLYTIC CAP. 100µF/10V M H7	CE1AMAVSL101
C3010	CHIP CERAMIC CAP.(1608) CH J 22pF/50V	CHD1JJ3CH220
C3011	CHIP CERAMIC CAP.(1608) CH J 22pF/50V	CHD1JJ3CH220
C3012	CHIP CERAMIC CAP.(1608) CH J 22pF/50V	CHD1JJ3CH220
C3014	CHIP CERAMIC CAP.(1608) F Z 0.1µF/25V	CHD1EZ30F104
C3015	ELECTROLYTIC CAP. 100µF/10V/M/H7 or	CEB101ENW025
	CAP ELECTROLYTIC 100µF/10V/M/H7 or	CA1A101ENE10
	ELECTROLYTIC CAP. 100µF/10V M H7	CE1AMAVSL101
CONNECTORS		
CN3001	FPC/FFC CONNECTOR 25P IMSA-9615S-25C-PP-A	JC96J25ER009
CN3002	CONNECTOR PRINT OSU S3B-PH-K-S(LF)(SN)	J3PHC03JG030
ICS		
IC3001	FL 8-ST-30NK	TVFD1C0FT059
IC3002	VFD DRIVER IC SC16315 or	NSZBA0TQ0010
	VFD DRIVER IC PT6315(L)	NSZBA0RG2009
TRANSISTORS		
Q3001	PNP TRANSISTOR SMD 2SA1980SFY or	NQ1Y2SA1980S
	CHIP TRANSISTOR KTA1504S-GR-RTK/P or	NQ14KTA1504S
	CHIP TRANSISTOR 2SA1530A-T112-1Z	QQ1Z2SA1530A
RESISTORS		
R3001	CHIP RES. 1/10W J 2.2 Ω or	RRXAJR5Z02R2
	RES CHIP 1608 1/10W J 2.2 Ω	RRXA2R2YF002
R3002	CHIP RES. 1/10W J 2.2 Ω or	RRXAJR5Z02R2
	RES CHIP 1608 1/10W J 2.2 Ω	RRXA2R2YF002
R3003	CHIP RES. 1/10W J 2.2 Ω or	RRXAJR5Z02R2
	RES CHIP 1608 1/10W J 2.2 Ω	RRXA2R2YF002
R3004	CHIP RES. 1/10W J 47 Ω or	RRXAJR5Z0470
	RES CHIP 1608 1/10W J 47 Ω	RRXA470YF002
R3005	CHIP RES. 1/10W J 47 Ω or	RRXAJR5Z0470
	RES CHIP 1608 1/10W J 47 Ω	RRXA470YF002
R3006	CHIP RES. 1/10W J 10k Ω or	RRXAJR5Z0103
	RES CHIP 1608 1/10W J 10k Ω	RRXA103YF002
R3007	CHIP RES. 1/10W J 10k Ω or	RRXAJR5Z0103
	RES CHIP 1608 1/10W J 10k Ω	RRXA103YF002
R3008	CHIP RES. 1/10W J 82k Ω or	RRXAJR5Z0823
	RES CHIP 1608 1/10W J 82k Ω	RRXA823YF002
R3009	CHIP RES. 1/10W J 10k Ω or	RRXAJR5Z0103
	RES CHIP 1608 1/10W J 10k Ω	RRXA103YF002
R3010	CHIP RES. 1/10W J 560 Ω or	RRXAJR5Z0561
	RES CHIP 1608 1/10W J 560 Ω	RRXA561YF002
R3011	CHIP RES. 1/10W J 680 Ω or	RRXAJR5Z0681
	RES CHIP 1608 1/10W J 680 Ω	RRXA681YF002
R3012	CHIP RES. 1/10W J 750 Ω or	RRXAJR5Z0751
	RES CHIP 1608 1/10W J 750 Ω	RRXA751YF002
R3013	CHIP RES. 1/10W J 1k Ω or	RRXAJR5Z0102
	RES CHIP 1608 1/10W J 1.0k Ω	RRXA102YF002
R3014	CHIP RES. 1/10W J 1.5k Ω or	RRXAJR5Z0152
	RES CHIP 1608 1/10W J 1.5k Ω	RRXA152YF002
R3015	CHIP RES. 1/10W J 2.2k Ω or	RRXAJR5Z0222
	RES CHIP 1608 1/10W J 2.2k Ω	RRXA222YF002
R3016	CHIP RES. 1/10W J 470 Ω or	RRXAJR5Z0471
	RES CHIP 1608 1/10W J 470 Ω	RRXA471YF002
R3017	CHIP RES. 1/10W J 2.2k Ω or	RRXAJR5Z0222
	RES CHIP 1608 1/10W J 2.2k Ω	RRXA222YF002
R3018	CHIP RES. 1/10W J 10k Ω or	RRXAJR5Z0103
	RES CHIP 1608 1/10W J 10k Ω	RRXA103YF002
R3020	CHIP RES. 1/10W J 100 Ω or	RRXAJR5Z0101

Ref. No.	Description	Part No.
	RES CHIP 1608 1/10W J 100 Ω	RRXA101YF002
R3021	CHIP RES. 1/10W J 100 Ω or	RRXAJR5Z0101
	RES CHIP 1608 1/10W J 100 Ω	RRXA101YF002
R3022	CHIP RES. 1/10W J 100 Ω or	RRXAJR5Z0101
	RES CHIP 1608 1/10W J 100 Ω	RRXA101YF002
R3025	CHIP RES.(1608) 1/10W 0 Ω or	RRXAZR5Z0000
	RES CHIP 1608 1/10W J 0 Ω	RRXA000YF002
R3026	CHIP RES.(1608) 1/10W 0 Ω or	RRXAZR5Z0000
	RES CHIP 1608 1/10W J 0 Ω	RRXA000YF002
R3027	CHIP RES.(1608) 1/10W 0 Ω or	RRXAZR5Z0000
	RES CHIP 1608 1/10W J 0 Ω	RRXA000YF002
R3028	CHIP RES.(1608) 1/10W 0 Ω or	RRXAZR5Z0000
	RES CHIP 1608 1/10W J 0 Ω	RRXA000YF002
R3029	CHIP RES.(1608) 1/10W 0 Ω or	RRXAZR5Z0000
	RES CHIP 1608 1/10W J 0 Ω	RRXA000YF002
SWITCHES		
SW3001	TACT SWITCH SKQSAB or	SST0101AL038
	TACT SWITCH KSM0612B	SST0101HH003
SW3002	TACT SWITCH SKQSAB or	SST0101AL038
	TACT SWITCH KSM0612B	SST0101HH003
SW3003	TACT SWITCH SKQSAB or	SST0101AL038
	TACT SWITCH KSM0612B	SST0101HH003
SW3004	TACT SWITCH SKQSAB or	SST0101AL038
	TACT SWITCH KSM0612B	SST0101HH003
SW3005	TACT SWITCH SKQSAB or	SST0101AL038
	TACT SWITCH KSM0612B	SST0101HH003
SW3006	TACT SWITCH SKQSAB or	SST0101AL038
	TACT SWITCH KSM0612B	SST0101HH003
MISCELLANEOUS		
B16	FOOT K7010UA	0VM403657A
RS3001	SENSOR REMOTE RECEIVER KSM-712TH2P or	USESJRSKK060
	SENSOR REMOTE RECEIVER KSM-712TH2E	USESJRSKK044

POWER SW CBA

Ref. No.	Description	Part No.
	POWER SW CBA Consists of the following:	----------
DIODE		
D3001	LED(RED) LTL-1CHEE	NPQZLTL1CHEE
SWITCHES		
SW3007	TACT SWITCH SKQSAB or	SST0101AL038
	TACT SWITCH KSM0612B	SST0101HH003
MISCELLANEOUS		
WX3003	WIRE ASSEMBLY FLONT-PWSW 3P WX1E1S10-001	WX1E1S10-001

HT2-M200
E1T12ED/13ED
2010-09-24